TRANSCRIPT OF RECORD.

SUPREME COURT OF THE UNITED STATES.

No. 303.

BARNEY TIERNAN AND PATRICK TIERNAN, PARTNERS AS B. & P. TIERNAN, L. L. HIGGINS, ET AL., PLAINTIFFS IN ERROR,

vs.

SELIM RINKER, AS COUNTY TREASURER OF THE COUNTY OF GALVESTON, TEXAS.

IN ERROR TO THE SUPREME COURT OF THE STATE OF TEXAS.

FILED OCTOBER 15, 1877.

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a L. L. HIGGINS ET ALS., APPELLANTS,
vs.
SELIM RINKER, COUNTY TREASURER, APPELLEE. } No. 843.

Appeal from the supreme court of the State of Texas at its Galveston term, January, A. D. 1877.

Transcript demanded by A. H. Willie, October 2d, A. D. 1877, and delivered to him October 8th, A. D. 1877.

N. J. MOORE,
Clerk Supreme Court of Texas at Galveston.

1 *Caption.*

No. 843.

L. L. HIGGINS ET ALS, APPELLANTS,
vs.
SELIM RINKER, APPELLEE. } 3d assignment.

Appeal from district court of Galveston County at its June term, A. D. 1876.

L. E. TREZVANT,
Attorney for Appellant.

Filed Jan'y 29th, 1877.

N. J. MOORE,
Clerk Supreme Court, Galveston.

2 *Demand of transcript in dist. court.*

L. L. HIGGINS ET AL., APPELLANT,
vs.
SELIM RINKER, APPELLEE. } No. .

Appeal from the district court of Galveston County, at its June term, A. D. 1876.

Transcript demanded by L. E. Trezevant, attorney for appellants, August 26th, A. D. 1876, and delivered to him on the 21st day of January, A. D. 1877.

[SEAL.] J. P. HARRISON,
Clerk D. C. G. C.

3 STATE OF TEXAS,
County of Galveston:

Be it remembered that at a regular term of the district court in and for the county of Galveston, before the Honorable Wm. H. Stewart, judge of the 26th judicial district of the State of Texas, begun and holden at the court-house, in the city and county of Galveston, on the fifth day of June, A. D. 1876, that being the first Monday of said month, and the day appointed by law for that purpose, among others the following cause came on for trial, viz:

Style of suit dist. court.

L. L. HIGGINS ET AL., PLAINTIFFS,
vs.
SELIM RINKER, DEFENDANT.

4 *Petition.—Filed May* 31, 1876.

THE STATE OF TEXAS,
County of Galveston:

To the Honorable William H. Stewart, judge of the 26th judicial district of the State of Texas:

Your petitioners, Theodore Arnold, John B. Borrelly, James H. Butcher, E. L. Bremond, Ferdinand S. Carpenter, John Corson, Martin A. Davey, George H. Dirmeyer, Victor Frank, Edward Garrett, Daniel Gillies, Albert Hoppe, Louis L. Higgins, John A. Johnston, John Kirker, E. D. Latour, Charles Lassen, Matt Lorsen, Férriol Michalet, Angus McDonald, Jas. McFadden, Geo. C. Rains, Carl Schilling, August Single, Joseph Trave, François Tojan, Frederick Wolff, Henry Walken, William Wurzlon, Barney Tiernan and Patrick Tiernan, partners under the firm name of B. & P. Tiernan, Michael V. Cambeihl and Loppman Gros, partners under the name of Cambeihl & Gros, John M. Laeris and Frank Geozza, partners under the name of J. M. Laeris & Co., Lawrence Nugent and Jno. A. Fitzpatrick, partners under the name of Nugent and Fitzpatrick, Bernard Sbisa and James Ofila, partners under the name of Sbisa and Offila, respectfully represents that they are citizens of Galveston County, and are now pursuing in said county the occupation of selling spirituous, vinous, malt, and other intoxicating liqours in quantities less than one quart.

Your petitioners, Jacob Block, Charles Dalian, Alphonse Dreyfus, William B. Hough, Theodore Kleinecke, Jas. F. Magalé, Edwin E. Rice, doing business under the name of E. E. Rice & Co., Ambrose
5 Lonella, Moses Freiberg, and Sam'l Klein, partners under the firm name of Freiberg, Klein & Co., Theodore Kleinecke, and Adolph Stawenski, and Aristide Forciola respectfully represents that they are citizens of Galveston County, and are now pursuing in said county the occupation of selling spirit'ous, vinous, malt, and other intoxicating liqours in quantities of one quart and less than ten gallons. All of your petitioners complain of Selim Rinker in his official capacity of county treasurer for the county of Galveston, the said Selim Rinker being the county treasurer for Galveston County, and a citizen of said county, and hereinafter styled the defendant.

Your petitioners institute this suit in behalf of themselves and all others who, engaged in the aforesaid occupation in the county of Galveston, have a like interest herein with your petitioners, and a common interest in the subject-matter of this suit, asking the same relief, on the same ground, against the same defendant, in order to avoid a multiplicity of suits and a needless multiplication of costs.

Your petitioners represent that there are a large number of other persons who are now pursuing the above-named occupation in the county of Galveston.

Your petitioners represent that the wines and beer, in the sale of which they are engaged as above stated, are not of the manufacture of

the State of Texas, but are of the manufacture of other States of the United States of America and of foreign nations.

Your petitioners represent that on the 29th day of March, A. D. 1876, at a regular term of the county court for the county of Galveston,
6 the said county court made and caused to be entered upon the record of the proceedings of said court a certain order, a copy of which is in substance as follows:

"And be it further ordered that there shall be levied and collected for the use of Galveston County, from every person or association of persons pursuing any of the occupations mentioned in the third section of an act of the legislature of the State of Texas, approved June 3rd, 1873, entitled 'An act regulating taxation,' one-half of the amount levied by said act for the use of the State."

Your petitioners represent that under and by authority of said order of said county court the said Selim Rinker, in his official capacity as aforesaid, and his agents and employees are now claiming of each one of your petitioners who is pursuing the occupation of selling spirituous, vinous, malt, and other intoxicating liquors in quantities of less than one quart, the sum of one hundred dollars as an annual occupation tax, imposed and ordered to be collected by said order of said county court from every person and association of persons pursuing said occupation in the county of Galveston, and now demands of each of them that they pay to him for the use of Galveston County the said sum of one hundred dollars for the year 1876.

Your petitioners represent that under and by authority of said order of said county court the said Selim Rinker, in his official capacity as aforesaid, and his agents and employees are now claiming of each one of your petitioners who is pursuing the occupation of selling spirituous, vinous, malt, and other intoxicating liquors in quantities of one
7 quart and less than ten gallons, the sum of fifty dollars as an annual occupation tax, imposed and ordered to be collected by said order of said county court from every persons and association of persons pursuing said occupation in the county of Galveston, and now demands of each of them that they pay to him for the use of Galveston County the said sum of fifty dollars for the year 1876.

Your petitioners represent that defendant has at various and divers times notified and threatened each one of them that he will levy upon and seize and sell at public sale to the highest , for cash, the personal property of your petitioners for the purpose of collecting and enforcing the payment of said annual taxes, or such an amount of the property of each one of your petitioners as will be sufficient to pay the amount of said taxes for one year and all costs of such seizure and sale, if your petitioners and each of them do not pay and do further refuse to pay to him said taxes for the use and benefit of said county.

Your petitioners are advised, and they so charge, that the aforesaid act of the legislature is, in so far as it imposes a tax of two hundred dollars and a tax of one hundred dollars upon all persons who are pursuing the aforesaid occupations, repugnant to and in conflict with the Constitution of the United States, and that the tax imposed thereby and the tax imposed by said order of said county court upon your petitioners is unconstitutional and illegal; wherefore your petitioners have refused, and do still refuse, to pay said taxes. Your petitioners are further advised, and they so charge, that the said occupation tax
8 claimed of them, being imposed upon them because of the vending of spirituous, vinous, malt, and other intoxicating liquors, is a tax upon the liquors themselves as property and is imposed in viola-

tion of the constitution of this State, because not imposed in proportion to the value of the property upon which it is levied, and is not as an ad valorem tax equal and uniform.

Your petitioners represent that unless restrained by the writ of injunction, defendant and his agents and employees will levy upon and will seize and sell the property of each one of your petitioners at public sale to the highest bidder for cash for the purpose of collecting and enforcing the payment of said tax for the use of the county of Galveston, and are now proceeding to do so.

Wherefore your petitioners pray that your honor will grant them the writ of injunction to enjoin and restrain Selim Rinker, in his official capacity of county treasurer for the county of Galveston, and his agents and employees from demanding and collecting from them and each of them the aforesaid tax levied as aforesaid by said order of said county court, and from levying upon and selling their property for the purpose of collecting or enforcing the payment of said tax, and from disturbing or in anywise molesting them on account of their failure and refusal to pay said tax until the hearing of this cause and its determination by the district court within and for the county of Galveston.

Your petitioners pray that upon a hearing of this cause said tax be adjudged illegal, and that the writ of injunction herein prayed
9 for be perpetuated. They pray for process of citation and for costs of suit, and for such other and further relief to which they may be entitled.

L. E. TREZEVANT,
Att'y for Petitioners.

THE STATE ON TEXAS,
County of Galveston:

Before the undersigned authority this day personally appeared Louis L. Higgins, who on oath says that he is one of the petitioners in the above and foregoing petition, and that the allegations therein made and contained are true.

L. L. HIGGINS.

Sworn to and subscribed before me this fifth day of May, A. D. 1876. Witness my hand and official seal.

[SEAL.] THOMAS D. GILBERT,
Notary Public, G. C.

AT CHAMBERS, 26TH JUDICIAL DISTRICT,
May 6th, 1876.

Having read and duly considered the foregoing petition of L. L. Higgins et al. vs. Selim Rinker, I now here grant the writ of injunction as prayed for, upon each of the petitioners giving an injunction bond conditioned and payable as required by law in double the amount of the tax against each petitioner, which several bonds will be taken and approved by the district clerk of Galveston County before the issu-
10 ance of the writs above ordered; said writs to restrain the defendant as prayed for until the further order of the district court for Galveston County, or of the judge thereof.

WILLIAM H. STEWART,
Judge of 26th Judicial District of Texas.

Writ of injunction.—Issued May 31, 1876.

L. L. HIGGINS ET AL.
vs.
SELIM RINKER.

The State of Texas to the sheriff or any constable of Galveston County, greeting:

Whereas Louis L. Higgins and other persons, whose names are hereinafter set forth, have filed in the district court for Galveston County in behalf of themselves and others of like interest their petition, wherein they allege in substance that Theodore Arnold, Jno. B. Borrelly, James H. Butcher, E. L. Bremond, Ferdinand I. Carpenter, John Corsen, Martin A. Davey, George H. Dirmeyer, Victor Frank, Edward Garret, Daniel Gillies, Abert Hoppe, Louis L. Higgins, Jno. A. Johnston, Jno. Kirker, E. D. Latour, Charles Lassen, Matt Lorsen, Fernol Michalet, Angus McDonald, Jas McFadden, Geo. C. Rains, Carl Schilling, August Single, Joseph Trave, Francois Tojan, Frederick Wolff, Henry Walken, William Wurzlon, Barney Tiernan, and Patrick Tiernan, partners under the name of B. & P. Tiernan, Michael V. Cambeihl and Loppman Gros, partners under the name of Loppman & Gros, Jno. M. Laeris and Frank Goezza, partners under the name of J. M. Laeris & Co., Lawrence Nugent and Jno. A. Fitzpatrick, partners under the name of Nugent and Fitzpatrick, Bernard Sbisa and James Ofila, partners under the
11 name of Sbisa and Ofila, are now pursuing, in Galveston County, the occupation of selling spirituous, vinous, malt and other intoxicating liquors in quantities less than one quart, and that Jacob Block, Chas. Dalian, Alphonse Dreyfus, W. B. Hough, Theodore Kleinecke, Edwin E. Rice, James F. Magale, Ambrose Tonella, Aristide Forciola, Adolph Stawenski, Moses Freiberg and Samuel Klein, partners under the name of Freiberg, Klein & Co., are now pursuing, in Galveston County, the occupation of selling spirituous, vinous, malt, and other intoxicating liquors, in quantities of one quart and less than ten gallons.

And that Selim Rinker, in his official capacity of county treasurer for the county of Galveston, now demands of the above named persons, and of each of them, who are selling spirituous, vinous, malt, and other intoxicating liquors in quantities less than one quart, that they and each of them pay to him as county treasurer for Galveston County the sum of one hundred dollars as an annual occupation tax, imposed by order of the county court of Galveston upon all persons pursuing said occupation in the county of Galveston, and that said county treasurer now demands of the above-named persons, and of each of them, who are selling spirituous, vinous, malt and other intoxicating liquors in quantities of one quart and less than ten gallons, that they and each of them pay to him, as county treasurer for Galveston County, the sum of fifty dollars as an annual occupation tax imposed by order of the county court of Galveston upon all persons pursuing said occupation in the county
12 of Galveston, and that the said county treasurer is about to seize and sell their property for the purpose of collecting said occupation taxes for the use of Galveston County. That said complainants are advised, and they so charge, that the act entitled "An act regulating taxation," approved June 3rd, 1873, under and by authority of which the aforesaid taxes claimed by the county treasurer was levied by said county court, is repugnant to and in conflict with the Constitution of the

United States, and that said occupation tax is unconstitutional and illegal.

And whereas the above-named complainants have obtained from the honorable Wm. H. Stewart, judge of the 26th judicial district of this State, his fiat that the writ of injunction do issue to restrain the said Selim Rinker in his official capacity of county treasurer for Galveston County from demanding or collecting from the above named persons the aforesaid occupation tax, and the above named complainants having filed their bonds as required by the fiat of the judge aforesaid: Now, therefore, the said Selim Rinker in his official capacity as aforesaid is hereby commanded not to demand or to collect from the above named complainants the aforesaid occupation taxes, nor to molest or in any wise to harrass or to disturb any of said complainants for or on account of the non-payment of said taxes until the further hearing and determination of the suit of said complainants herein by the honorable district court for Galveston County. And you are hereby commanded to enjoin and restrain the said Selim Rinker in his official capacity as aforesaid
13 from demanding and collecting said occupation taxes from said complainants above named, and from molesting or in any wise disturbing any of them on account of the non-payment of said occupation taxes until the further order of the honorable district court for Galveston County.

Herein fail not, but of this writ make due return as required by law.

Witness J. P. Harrison, clerk of the district court for Galveston County.

Given under my hand and the seal of said court at office, in the city of Galveston, this 3rd day of May, 1876.

[SEAL.]

J. P. HARRISON,
Clk. D. C., G. C.,
By E. S. FLETCHER,
Deputy Clk.

Sheriff's return.

Received this writ on the 31st day of May, A. D. 1876, and executed the same on the 1st day of June, A. D. 1876, by delivering to the within named defendant, Selim Rinker, in person, in the county of Galveston a true copy of this writ.

ED. CRAIGEN,
C. G. C., Pre. 2.

Answer.—Filed June 9, 1876.

L. L. HIGGINS ET AL.
vs.
SELIM RINKER. } No. 8960.

Now comes the defendant in the above cause and demurs to
14 plaintiffs' petition and says that said petition, and the matters and things therein contained as therein stated and set forth, are wholly insufficient in law, and of this defendant prays the judgment of the court.

And further answering, without waiving his foregoing demurrer, but insisting on the same, this defendant denies all and singular the allegations in plaintiffs' petition, and says that the same are untrue.

BALLINGER, JACK & MOTT,
Defendant's Att'ys.

Supplemental petition.—Filed August 1st, 1876.

L. L. HIGGINS ET AL.
vs.
SELIM RINKER.

Suit No. 8960 pending in the district court of Galveston County.

To the honorable district court within and for the county of Galveston:

Your petitioners, James Henderson and John Grottger, partners under the firm name of Henderson and Grottger, Louis Romanet and Jules Girardin, partners under the firm name of Romanet and Girardin, Robert W. Sanders, doing business under the firm name of R. W. Sanders & Co., James Cross, Margaret Hob, Lorenzo Bauls, Bartholomew Donovan, Christian Holhn, Chas. F. Kaiser, Frederick W. Klitzung, Joseph Fischl, Lillie Jewell, Charles Vanthier, Maggie A. Mitchell, Francois Trave, Fritz Thiesfildt, and Dorata Tolex now come into court as parties plaintiff in the above-entitled cause, and filing in said cause
15 their several injunction bonds in compliance with the fiat of the judge granting the writ of injunction in said cause, they allege that your petitioners Henderson & Grottger, Jas. Cross, Lorenzo Bauls, Bartholomew Donovan, Margaret Hale, Christian Holhn, Jos. Fischl, Lillie Jewell, Chas. F. Kaiser, Frederick W. Klitzung, Maggie A. Mitchell, Dorata Tolex, and Charles Vanthier are now pursuing in Galveston County the occupation of selling spirituous, vinous, malt, and other intoxicating liquors in quantities less than one quart. That your petitioners R. W. Saunders & Co. and Romanet and Girardin are pursuing in said county the occupation of selling spirituous, vinous, malt, and other intoxicating liquors in quantities of one quart and less than ten gallons.

Your petitioners represent that the wines and beer in the sale of which they are engaged as above stated are not of the manufacture of this State, but are of the manufacture of other States of the United States of America and of foreign nations. Your petitioners join in and adopt as their own the averments made in the original petition filed in this cause, and allege the same to be true as to them and each of them. Your petitioners join in the prayer for relief as made in the original petition, and submit themselves to the judgment of the court.

L. E. TREZEVANT,
Attorney for Plaintiffs.

Writ of injunction.—Issued Aug. 4, 1876.

L. S. HIGGINS ET ALII.
vs.
SELIM RINKER.

The State of Texas to the sheriff or any constable of Galveston
16 County, greeting:

Whereas Louis L. Higgins and other persons whose names are hereinafter set forth have filed in the district court for Galveston County, in behalf of themselves and others of like interest, their supplemental petition, wherein they allege in substance that Jas. Henderson and Jno. Grottgar, partners under the firm name of Henderson and Grottgar, Louis Romanet and Jules Girardin, partners under the firm name of Romanet and Girardin, Robt. W. Sanders, doing business under the

name of R. W. Sanders & Co., James Cross, Margaret Hob, Lorenzo Bauls, Bartholomew Donovan, Christian Holhn, Chas. L. Kaiser, Frederick W. Klitzing, Jos. Fischl, Lillie Jewell, Chas. Vanthier, Maggie A. Mitchell, Francois Trave, Fritz Thieffildt, and Doroto Tolex are pursuing in Galveston County the occupation of selling spirituous, vinous, malt, and other intoxicating liquors in quantities less than one quart.

That your petitioners R. W. Sanders & Co. and Romanet & Girardin are pursuing in said county the occupation of selling spirituous, vinous, malt, and other intoxicating liquors in quantities of one quart and less than ten gallons, and that Selim Rinker, in his official capacity of county treasurer for the county of Galveston, now demands of the above-named persons and of each of them who are selling spirituous, vinous, malt and other intoxicating liquors in quantities less than one quart, that they and each of them pay to him as county treasurer for Galveston County the sum of one hundred dollars as an annual occupation tax imposed by order of the county court of Galveston County upon
17 all persons pursuing said occupations in the county of Galveston; said county treasurer now demands of the above-named persons and of each of them who are selling spirituous, vinous, malt, and other intoxicating liquors in quantities of one quart and less than ten gallons, that they and each of them pay to him as county treasurer for Galveston County the sum of fifty dollars as an annual occupation tax, imposed by order of the county court of Galveston County upon all persons pursuing said occupation in the county of Galveston, and that the said county treasurer is about to seize and sell their property for the purpose of collecting said occupation taxes for the use of Galveston County.

That said complainants are advised, and they so charge, that the act entitled "An act regulating taxation," approved June 3rd, 1873, under and by authority of which the aforesaid taxes claimed by the said county treasurer was levied by said county court, is repugnant to and in conflict with the Constitution of the United States, and that said occupation tax is unconstitutional and illegal.

And whereas the above-named complainants have obtained from the honorable William H. Stewart, judge of the 26th judicial district of this State, his fiat that the writ of injunction do issue to restrain the said Selim Rinker in his official capacity of county treasurer for Galveston County from demanding or collecting from the above-named persons the aforesaid occupation tax; and the above-named complainants having filed their bonds as required by the fiat of the judge aforesaid:
18 Now, therefore, the said Selim Rinker, in his official capacity as aforesaid, is hereby commanded not to demand or to collect from the above-named complainants the aforesaid occupation taxes, nor to molest or in anywise to harrass or to disturb any of said complainants for or on account of the non-payment of said taxes, until the further hearing and determination of the suit of said complainants herein by the honorable district court of Galveston County.

And you are hereby commanded to restrain the said Selim Rinker in his official capacity as aforesaid from demanding and collecting said occupation taxes from said complainants above-named, and from molesting or in anywise disturbing any of them on account of the non-payment of said occupation taxes until the further order of the honorable district court of Galveston County.

Herein fail not, but of this writ make due return as required by law.

Witness J. P. Harrison, clerk of the district court for Galveston County.

Given under my hand and the seal of said court at office in the city of Galveston, this 4th day of August, A. D. 1876.

J. P. HARRISON,
Clk D. C., G. C.

19 *Amended petition.—Filed August* 5, 1876.

L. L. HIGGINS ET AL.
vs.
SELIM RINKER.

Suit No. 8960, pending in the district court of Galveston County.

Now comes the plaintiffs in the above-entitled cause, by their attorney, and by leave of the court amend their petition, and say that they are advised, and they so charge, that the act of the legislature of the State of Texas entitled "An act regulating taxation," approved June 3rd, 1873, in so far as it imposes a tax upon your petitioners and all persons pursuing the occupation of selling spirituous, vinous, malt, and other intoxicating liquors, in quantities less than one quart, and in quantities of one quart and less than ten gallons, discriminates in favor of the wines and beer that are of the manufacture of this State, and is therefore repugnant to and in conflict with article one, section 8, paragraph four, of the Constitution of the United States, and that the said tax imposed by said act and the said tax imposed by said order of said county court is unconstitutional and illegal.

Your petitioners are further advised and they so charge that the defendant, Selim Rinker, has no right, or power, or authority in law, by virtue of his office of county treasurer or otherwise, to demand or to collect from your petitioners the occupation taxes which defendant claims and demands of them and is seeking to collect from them, as stated in their original and supplemental petitions, and this because defendant, not being the sheriff of Galveston County, nor never having been elected as the collector of taxes for said county, is not the officer
20 designated by the constitution of this State as the officer having power to collect taxes.

Wherefore plaintiffs pray that the writ of injunction issued in this cause be perpetuated. They further pray as in their original petition.

L. E. TREZEVANT,
Att'y for Plaintiffs.

Amended answer.—Filed August 5, 1876.

L. L. HIGGINS ET AL.
vs.
SELIM RINKER. } No. 8960.

Now comes the defendant in the above cause and by leave of court amends his answer herein, and by way of amendment thereto alleges as follows:

1st. That defendant is the county treasurer of Galveston County, State of Texas, and is authorized by law to enforce and collect the taxes complained of in plaintiffs' petition.

2nd. That the taxes complained of in said petition are occupation taxes duly authorized and assessed in conformity with the laws of the State of Texas, which are valid and binding and not in conflict with the Constitution and laws of the United States.

3rd. This defendant accordingly prays that the injunction herein be dis'olved, and that he go hence with his costs.

BALLINGER, JACK AND MOTT,
Counsel for Defendant.

21 *Judgment.*

L. L. HIGGINS ET AL.
vs.
SELIM RINKER. } August 11, 1876.

The above-styled cause having come on to be heard, the parties, appearing by their respective attorneys, had leave of the court to amend their pleadings, and the cause having submitted to the court on the 5th day of August, 1876, as well matters of fact as of law, a jury having been waived by the parties, the demurrer of the defendant to the pleadings of complainants is, this 11th of August, 1876, sustained; and it is ordered, adjudged, and decreed by the court that the injunction heretofore granted be, and the same is hereby, dissolved, and the petition of the complainants dismissed. It is further ordered that the complainants herein do pay all costs of court incurred in this suit for which execution may issue.

To which ruling and judgment of the court the complainants except, and give notice of appeal to the supreme court of Texas.

Appeal bond.—Filed August 26, 1876.

In the district court of Galveston County.

L. L. HIGGINS ET AL.
vs.
SELIM RINKER. } No. 8960. Suit No. 8960.

Whereas in a certain suit instituted and filed on the day of A. D. 1876, in the district court holden in and for the county of
22 Galveston, and numbered 8960 on the docket of said county, wherein Selim Rinker in his official capacity of county treasurer for the county of Galveston is defendant, a writ of injunction restraining the said Selim Rinker from collecting certain taxes from the plaintiffs in said suit was sued out against the said Selim Rinker, as county treasurer as aforesaid, by the following-named persons, plaintiffs in said suit: Theodore Arnold, Jno. B. Borrelley, E. L. Bramond, Lorenzo Banlo, Jacob Black, J. A. H. Butcher, John Carson, James Cross, J. F. Carpenter, Charles Dalian, Alphonso Dreyfus, M. A. Darcy, B. Donovan, G. H. Dirmeyer, Jos. Fishel, A. Forceola, Edward Garrett, D. Gillis, Albert Hoppe, Christian Holhn, Margaret Hob, W. B. Hough, L. L. Higgins, John A. Johnson, Jno. Kirker, Charles J. Waiser, E. D. Latour, Jewell sisters, J. W. Klitzing, Matt Lonsin, Ferrial Michalet, Jas. F. Magale, Jas. McFadden, Angus McDonald, Maggie A. Mitchell, Geo. C. Raines, Carl Schelling, August Single, Adolph Slawinsky, Francis Tajoris, Jos. Trave, Ambrose Tonella, Dorotha Tolex, Jeety Theisfulolt, Robert M. Sanders, Edmond E. Rice, Henry Walkens, Wm. Wurzlon, Frederick Wolf, Frieburger, Klein & Co., Campbell & Gross, B. & P. Tiernan, J. W. Louns & Co., August and Fitzpatrick, Shesa & Ofila, Henderson & Grottger, Romanet & Girardin, Frank Victor.

And whereas on the 11 day of August, A. D. 1876, a judgment was rendered in said suit by the district court holden in and for the county of Galveston against said plaintiff for the costs of suit, and also
23 dis'olving said writ of injunction and dismissing plaintiffs' petition, and whereas the above-named parties plaintiffs in said suit have appealed from said judgment to our supreme court:

Now, therefore, we, the above-named parties plaintiffs, as principals, and and , as sureties, do hereby acknowledge ourselves bound to pay to the said Selim Rinker, as county treasurer, the sum of three hundred dollars, conditioned that the above-named parties shall prosecute their appeal with effect, and perform the sentence, judgment, or decree of the supreme court in case the decision of said court shall be against the appellants.

Witness our hands and scrolls (for seals) this 4th day of January, A. D. 1877.

L. L. HIGGINS. [L. S.]
T. J. HALEY. [L. S.]
C. B. FRANKLIN. [L. S.]

Approved this 20th day of August, A. D. 1876.

J. P. HARRISON,
Clk D. C., G. Co.

Assignment of errors.—Filed December 27, 1876.

L. L. HIGGINS ET AL. vs. SELIM RINKER. } Suit No. 8960.

Now comes the plaintiffs in the above-entitled cause by their
24 attorney and assign the following errors:

1st. The court erred in sustaining defendant's general demurrer to plaintiffs' petition, and in rendering judgment thereon for defendant.

2nd. The court erred in rendering judgment dissolving the writ of injunction issued in this case.

3rd. The court erred in rendering judgment dismissing plaintiffs' petition, when it should have rendered judgment perpetuating the writ of injunction.

L. E. TREZEVANT,
Attorney for Plaintiffs.

25 *Clerk's certificate dist. c'rt.*

STATE OF TEXAS,
County of Galveston:

I, J. P. Harrison, clerk of the district court in and for the county and State aforesaid, do hereby certify that the foregoing 22 pages contain a true and correct transcript of all the proceedings had in cause No. 8960, entitled L. L. Higgins et alii vs. Selim Rinker, as the same appears of record and on file in my office.

In witness whereof I have hereto set my hand and affixed the seal of said court at office, in the city of Galveston, this 21st day of January, A. D. 1877.

[SEAL.]

J. P. HARRISON,
Clerk D. C., G. C.

26 Supreme court of the State of Texas. Galveston term, A. D. 1877.

Be it remembered that at a regular term of the supreme court of the State of Texas, begun and holden at Galveston on the 1st day of January, A. D. 1877, that being the first Monday in said month and the day appointed by law for that purpose, before the Hon. O. M. Roberts, chief justice, and Hon. George F. Moore and Hon. R. S. Gould, associate justices, N. J. Moore, clerk, and W. H. Moore, deputy sheriff of and for the supreme court, the following proceedings were had, to wit:

Style of case in supreme c'rt.

L. L. HIGGINS ET ALS., APPELLANTS, *vs.* SELIM RINKER, APPELLEE. } Appealed from Galveston County.

Above case filed January 29th, 1877.

N. J. MOORE,
Clk Sup. Court.

27 *Order of supreme court.*

L. L. HIGGINS ET ALS., APPELLANTS, *vs.* SELIM RINKER, APPELLEE. } Febr'y 12th, 1877.

Appeal from Galveston County. Set for 28th inst. by consent.

Order of supreme court.

L. L. HIGGINS ET ALS., APPELLANTS, *vs.* SELIM RINKER, APPELLEE. } March 6th, 1877.

Appealed from Galveston County. Submitted on briefs by both parties.

Judgment of the supreme court at Galveston.

L. L. HIGGINS ET ALS., APPELLANTS, *vs.* SELIM RINKER, APPELLEE. } March 29th, 1877.

Appealed from Galveston County.
Opinion of the court delivered by Mr. Justice Moore.
This cause came on to be heard on the transcript of the record, and the same being inspected, because it is the opinion of this court that there was error in the judgment, it is considered, adjudged, and ordered that the judgment of the court below be reversed, and the cause remanded for further proceedings in accordance with the opinion of
28 this court; that the appellants, L. L. Higgins, Theodore Arnold, J. B. Borrelly, E. S. Bremond, Lorenzo Balslo, Jacob Block, J. H. Butcher, John Carson, James Cross, J. F. Carpenter, Charles Dalian, Alphonse Dreyfus, M. A. Davey, B. Donovan, George H. Dermeyer, Joseph Fishel, Austin Forceols, Edward Garret, Daniel Gillis, Albert

Hoppe, Christian Horn, Margaret Hab, W. B. Hough, John A. Johnson, John Kirker, Charles Waiser, E. D. Latour, Jewell Sisters, J. W. Kiltzing, Mat. Lawson, Ferril Michalet, James F. Magale, James McFidden, Angus McDonell, Magie A. Mitchel, George C. Rones, Charles Shelling, August Sinleg, Adolfs Slawinsky, Francis Tayoris, Joseph Trave, Ambrose Tonella, Doratha Talex, Jesty Thirsfuldt, Robert M. Sanders, Edmund E. Rice, Henry Watkins, William Wentzlaw, Frederick Wolff, Frebourg, Kylne & Co., Campbell & Gross, R. & P. Tiernan, J. W. Lons & Co., August & Fritzpatrick, Slesu & Orfela, Henderson & Grottger, Romanet & Girardin, Frank Victor, do have and recover of the appellee, Selim Rinker, all costs in this behalf expended, and this decision be certified below for observance.

Motion for rehearing.

In the supreme court.

L. L. HIGGINS ET ALS., APPELLANTS,
vs.
SELIM RINKER, APPELLEE.

To the honorable the supreme court of Texas, sitting at Galveston:

Now comes Selim Rinker, appellee, by his counsel, and moves
29 and prays the court to grant him a rehearing in this cause, because of his conviction that the court is in error in its opinion that the law in question is indivisible, and that the obnoxious proviso cannot be stricken out. No further controversy is proposed with respect to the views of the court or expressed in its opinion on the general features of the cause. But it is most respectfully and urgently submitted that the court, in the urgency of business attending the closing of the term, and the limited time allowed for the examination of authorities, has fallen into error in holding that the proviso complained of may not be eliminated from the law and the law itself still stand valid and constitutional. This question is of deep concern to the financial interests of the State and county. There was no oral argument. Our brief was merely a skeleton of point and authorities. We believe that the weight of authority is against the court, and that we can make this appear by an additional brief, by which we will endeavor to make the work for the court easy and satisfactory. Appellee has no right of appeal to the Supreme Court of the United States.

Respectfully submitted.

BALLINGER, JACK AND MOTT.

Motion for rehearing counsel for appellee. Filed March 29th, 1877.
N. J. MOORE,
Clk Sup. Ct.

30 *Order of supreme court on motion for rehearing.*

L. L. HIGGINS ET ALS., APPELLANTS,
vs.
SELIM RINKER, APPELLEE. } March 29th, 1877.

Appealed from Galveston County.

The motion for rehearing being presented, and service thereon ac

knowledged, it is ordered that the cause, together with the motion, be taken under advisement and transferred to the Austin term, and the judgment herein rendered be suspended for further order of court.

From the minutes of the court, March 29th, 1877.

Order on motion for rehearing in supreme court.

L. L. HIGGINS ET ALS., APPELLANTS,
vs.
SELIM RINKER, APPELLEE.

Appealed from Galveston County.

Motion presented, taken under advisement, and transferred to Austin, and judgment suspended till further orders.

Taken from the motion docket, March 29th, 1877.

31 *Opinion of Associate Justice Moore.*

L. L. HIGGINS ET AL.
vs.
SELIM RINKER. } No. 843. Appeal from Galveston.

The objections made by appellants to the validity of the taxes brought in question in this case are: that the law by which they are levied is repugnant to the fourth paragraph of the eighth section of the first article of the Constitution of the United States, which gives to Congress the power to regulate commerce with foreign nations and among the several States and Indian tribes; and also to second paragraph of section ten of said article, prohibiting any State from laying imposts or duties on imports or exports. And we feel constrained to hold in conformity to the ruling of the Supreme Court of the United States, in regard to statutes having similar provisions as that in the statute levying these taxes, that these objections must be sustained, though this conclusion is contrary to our own judgment as to the construction which should be given to the Constitution of the United States referred to and the statute by which these taxes are levied, or rather as to their proper relation or bearing upon each other.

The line of decisions in the Supreme Court of the United States, which has finally led to the ruling by which we think we are controlled, if we are to follow its decisions upon such subjects, which now seems to be too firmly settled to admit of controversy, began with the case of Brown vs. Maryland. (12 Wheat., 419.) In that case it was held that an act
of the legislature of the State of Maryland requiring importers
32 of foreign goods to pay a State license tax before selling such goods in the original form and packages in which they were imported was a duty or tax upon imports, and could not be imposed by the State. That a tax upon the occupation of an importer was a tax upon importation. That it was impossible to conceal the fact that this mode of taxation was only varying the form without varying the substance.

In the subsequent cases of Almy vs. California, 24 How., 169; Crandall v. Nevada, 6 Wall., 35; Woodruff v. Parham, 8 id., 123; Ward v. Maryland, 12 id., 418; Railroad Co. v. Pennsylvania, 15 id., 232; Railway Co. v. Richmond, 19 id., 589, and many others, the views expressed in the opinion of the court in Brown v. Maryland have been sanctioned and approved. And in some of them a still more enlarged effect and

greater control over State legislation is claimed to result from the provisions of the Constitution of the United States which we have cited than was insisted upon in that case. But in none of the cases decided by the Supreme Court of the United States, however, prior to the case of Walton v. State of Missouri, (1 Otto, 275,) is there, in our opinion, an authoritative ruling of the court decisive of the precise question presented in this case. The statute of the State of Missouri which gave rise to the case of Walton v. State, declared that persons who deal in goods, wares, and merchandise not the growth, produce or manufacture of the State, by going from place to place to sell them, are peddlers, and as such are required to pay a license tax; while for the sale in the same manner of articles grown, produced or manufactured within
33 the State, no such tax is imposed. The supreme court of Missouri held, as we think correctly, that the law simply imposed a tax upon an occupation. That the amount of it was not regulated by the value of the property, or the amount of business transacted by the party upon whom it was levied, and hence it could not be regarded in any proper sense as a tax upon property. That it made no attempt to regulate inter-State commerce, and could not justly be held to discriminate against the products of other States. (52 Mo., 288.)

But an entirely different view was taken of the statute by the Supreme Court of the United States.

exacting the tax of all persons selling spirituous, vinous, malt, or other intoxicating liquors.

On the question of the divisibility of the act, Welton vs. State of Missouri is no authority. The statute in that case was evidently indivisible & was so treated.

The statute under consideration, in pursuance of the settled policy of the State, seeks, in its main enacting clause, to raise a revenue by imposing a tax on persons pursuing the occupation of selling intoxicating liquors of any kind, including wine & beer. For the evident but secondary purpose of discriminating in favor of wines & beer manufactured in the State, a proviso is added to exempt from this tax those selling only such wine & beer. I say such is the evident purpose of the proviso, because, if valid, such is its effect. The object of the body of the law seems to be revenue and the regulation of the occupation. The object of the proviso seems to be the encouragement of home manufactured wines and beer. The relation of the leading objects of the law to
39 the subordinate object of the proviso is not such as to warrant the belief that the act & the proviso were intended to stand or fall as a whole, and that without the proviso, the revenue or leading part of the law would not have been enacted. The case presented does not differ materially as to the divisibility of the law from any other invalid exemption appended to a law imposing a tax. There authority for strik-

And the court, referring to the difficulty of drawing the line precisely where the commercial power of Congress ends and the power of the State begins, which had been recognized, in Brown v. Maryland, say:

"Following the guarded language of the court in that case, we observe here, as was observed there, that it would be premature to state any rule which would be universal in its application, to determine when the commercial power of the Federal Government over a commodity has ceased and the power of the State has commenced. It is sufficient to hold now that the commercial power continues until the commodity has ceased to be the subject of discriminating legislation by reason of its foreign character. That power protects it even after it has entered the State from any burthens imposed by reason of its foreign origin. The

act of Missouri encroaches upon this power in this respect, and is therefore, in our judgment, unconstitutional and void." If there is a difference between the act of Missouri and that by which these taxes are levied, the best reflection which we have been able to give to them leads us to the conclusion that it is in degree and not in principle. We therefore, as has been said, feel ourselves constrained to hold that the statute under which the taxes complained of by appellant were levied is
35 unconstitutional and void.

It is insisted by appellee that as appellants admit that they are engaged in the occupation of selling spirituous liquors, as well as that of selling vinous, malt, and other intoxicating liquors, not the product of this State, and as there is no pretence that the law makes any discrimination as to it, they have no cause to complain. This would be unquestionably true if the court could separate the constitutional from the unconstitutional part of the statute, so as to give effect to former without doing violence to the intention of the legislature. But the tax for the license is indivisible. The license is for the exercise of a single and indivisible occupation, though different articles may be sold by persons to whom a license is granted. And we cannot, without exercising legislative power, say that the same amount should be paid for the selling of spirituous liquors as for the selling of spirituous, vinous, and malt liquors.

The objections made by appellants to the validity of the taxes brought in question in this case are: that the law by which they are levied is repugnant to the fourth paragraph of the eighth section of the first article of the Constitution of the United States, which gives to Congress the power to regulate commerce with foreign nations and among the several States and Indian tribes; and also to second paragraph of section ten of said article, prohibiting any State from laying imposts or duties on imports or exports. And we feel constrained to hold in conformity to the ruling of the Supreme Court of the United States, in regard to statutes having similar provisions as that in the statute levying these taxes, that these objections must be sustained, though this conclusion is contrary to our own judgment as to the construction which should be given to the Constitution of the United States referred to and the statute by which these taxes are levied, or rather as to their proper relation or bearing upon each other.

The line of decisions in the Supreme Court of the United States, which has finally led to the ruling by which we think we are controlled, if we are to follow its decisions upon such subjects, which now seems to be too firmly settled to admit of controversy, began with the case of Brown vs. Maryland. (12 Wheat., 419.) In that case it was held that an act of the legislature of the State of Maryland requiring importers
32 of foreign goods to pay a State license tax before selling such

Appealed from Galveston County.

Opinion of the court delivered by Chief-Justice Roberts, Justice Moore dissenting.

On this day came on to be heard the motion of appellee for a rehearing in this cause, and the same being considered, it is ordered by the court that said motion be granted. And this cause coming on to be heard on the transcript of the record, and the same being inspected, because it is the opinion of this court that there was no error in the judgment of the court below, it is considered, adjudged, and ordered that the judgment of reversal rendered at the last Galveston term be set aside; that the judgment of the court below be in all things affirmed; that the appel

lants and their sureties, C. B. Franklin and T. J. Haley, pay all
37 costs in this behalf expended, and this decision be certified below for observance. It is further ordered that the clerk of this court return the papers in this cause to the clerk of the supreme court at Galveston, together with a certified copy of this judgment, and that it be entered on the minutes there as of last term.

Filed in Galveston branch July 11th, 1877.

N. J. MOORE,
Clerk Sup. C'rt Galveston.

38 *Opinion of Associate Justice Gould.*

L. L. HIGGINS ET AL.
vs.
SELIM RINKER. } No. 843.

Conceding, on the authority of Welton ver. State of Missouri, that the statute, so far as it discriminates against wines and beer imported from other States, is in violation of the Constitution of the United States, my opinion is that so much of the act as produces this discrimination may be rejected, & that there will remain the body of the law complete and capable of execution in accordance with the expressed legislative intent, exacting the tax of all persons selling spirituous, vinous, malt, or other intoxicating liquors.

On the question of the divisibility of the act, Welton vs. State of Missouri is no authority. The statute in that case was evidently indivisible & was so treated.

The statute under consideration, in pursuance of the settled policy of the State, seeks, in its main enacting clause, to raise a revenue by imposing a tax on persons pursuing the occupation of selling intoxicating liquors of any kind, including wine & beer. For the evident but secondary purpose of discriminating in favor of wines & beer manufactured in the State, a proviso is added to exempt from this tax those selling only such wine & beer. I say such is the evident purpose of the proviso, because, if valid, such is its effect. The object of the body of the law seems to be revenue and the regulation of the occupation. The object of the proviso seems to be the encouragement of home manufactured
wines and beer. The relation of the leading objects of the law to
39 the subordinate object of the proviso is not such as to warrant the belief that the act & the proviso were intended to stand or fall as a whole, and that without the proviso, the revenue or leading part of the law would not have been enacted. The case presented does not differ materially as to the divisibility of the law from any other invalid exemption appended to a law imposing a tax. There authority for striking out the unconstitutional exemption and leaving the law imposing the tax to read as if no such provision had been inserted. (People v. McReery, 34 Cal., 457; Exchange Bank of Columbus vs. Hines, 3 Ohio St., 34; Cooley on Taxation, p. 129.)

On the same principle the proviso in this case may be rejected, without the court justly incurring the charge of legislating. There would be no presumption that the unconstitutional purpose of discrimination was, though foreign to the apparent leading object of the act, really the controlling object, & that without the proviso the law would not have been passed. But we are not left to presumptions. The second proviso reads: "And provided further, that this section shall not be so con;

strued as to authorize druggists to sell spirituous or intoxicating liquors, except alcohol." This shows a prevailing intention that druggists, and certainly others as well as druggists, selling intoxicating liquors should pay the tax. By rejecting the unconstitutional proviso the legislative will as expressed is carried out, save as to one exemption, which could not be made.

On this ground, I think, there was a valid law imposing the full tax on all persons selling spirituous liquors, & that the judgment should be affirmed.

ROBERT S. GOULD,
Assoc. Jus.

Filed July 11th, 1877.

N. J. MOORE,
Clerk Sup. C'rt, Galveston.

40 *Opinion of Chief Justice Roberts.*

L. L. HIGGINS ET ALS. *vs.* SELIM RINKER. } No. 843. Appeal from Galveston County.

The Constitution provides that "taxation shall be equal and uniform throughout the State. All property in the State shall be taxed in proportion to its value, to be ascertained as directed by law, except such property as two-thirds of both houses of the legislature may think proper to exempt from taxation. The legislature shall have power to levy an income tax, and to tax all persons pursuing an occupation, trade, or profession; provided that the term occupation shall not be construed to apply to pursuits either agricultural or mechanical." (Sec. 19, Art. 12, Con't'n of 1869.) The legislature is given the power to tax all occupations, which includes the power to tax some of them only. The proviso presents a mode of expression designed to exempt from occupation tax agricultural and mechanical occupations. For they are occupations in point of fact which are pursued.

In pursuance of these provisions the law of 1873 was passed, under which this suit originated, entitled "An act regulating taxation." (Gen. laws, 1873, p. 198.)

It provides that there shall be levied on and collected from any person, firm, or association of persons pursuing any of the following named occupations an annual tax (except when herein otherwise provided) on every such occupation or separate establishment as follows: "For selling spirituous, vinous, malt, and other intoxicating liquors in
41 quantities less than one quart, two hundred dollars; in quantities of a quart and less than ten gallons, one hundred dollars, provided that this section shall not be so construed as to include any wines or beer manufactured in this State, or when sold by druggists for medicinal purposes; and provided further, that this section shall not be construed as to authorize druggists to sell spirituous or intoxicating liquors, except alcohol. For selling in quantities of ten gallons and over, one hundred dollars."

Here, again, the first proviso is a mere mode of expression, from which it is not to be inferred that wines and beer manufactured in this State do not fall under the denominations of vinous and malt liquors, but rather to exempt from the payment of an occupation tax any person who might engage in the occupation of selling them as a business, or have

an establishment for that purpose, who at the same time was not also selling spirituous liquors manufactured either in or out of the State. A person so engaged would in point of fact be pursuing an occupation other than agricultural or mechanical, and might, under the constitution, be required to pay an occupation tax as well as one who pursued the occupation of selling spirituous liquors also.

If a person sells domestic wines and beer, or either, in an establishment for the sale of spirituous liquors also, he cannot by this law get any benefit from the exemption in their favor. To get that benefit he must sell them in a separate establishment. And as a benefit was certainly intended to be conferred by the law, it necessarily follows that two different establishments were contemplated by the legislature
42 in passing the law.

The statute, therefore, notwithstanding its vague and in d nite expressions, evidently contemplates two distinct occupations to be pursued practically, or establishments to be kept under its provisions, to wit, one where the person engaged in it sells liquors, wines, and beer generally, and one where the person engaged in it sells wine and beer, or either. If the person sells spirituous liquors he must pay the occupation tax, whether he sells wine and beer or not, and whether he sells foreign or domestic wine and beer. If, however, he engages in the occupation of selling domestic wine and beer, or either, there is no law of this State requiring him to pay an occupation tax. If another person should engage in selling wine and beer only, which are manufactured in other States of the Union, by the terms of the law he would have to pay an occupation tax the same as though he sold spirituous liquors also. He could complain that the wine and beer sold him was taxed, because it was imported from other States by the operation of the law requiring him to pay an occupation tax. Under the Constitution of the United States, as construed in application to this subject by the Supreme Court of the United States, he should be relieved from such a tax, because it operates a discrimination against wine and beer manufactured in other States. It does not follow from this, however, that one who is engaged in the occupation of selling spirituous liquors is equally relieved, for when so engaged the exemption of the State law does not reach him, and in that occupation there is no discrimination against any
43 wines or beer. The discrimination can only exist when a different occupation than that of selling spirituous liquors is pursued, by confining it to the other occupation contemplated in our statute, of selling wines and beer alone. The plaintiffs in this case are engaged in the occupation of selling spirituous liquors. That occupation is taxed by our law under all circumstances, whether anything else is sold or not in the establishment. A wine or beer shop practically is a different establishment, and must be to get the exemption from tax under the statute of this State. When upon that an attempt is made to collect a tax, under the head of occupation tax, because foreign wine or beer is sold in it, the question may then, and not before, arise which is presented in this case.

The law should be construed in reference to the habits of business prevalent in the country at the time it was enacted. The law was not made to create or shape the habits of business, but to regulate them as then known to exist. The grocery, bar-room, saloon, or sample-room, was an establishment kept principally for the sale of spirituous liquors, and was fitted up in a way usually not to be mistaken as to its leading object. The sale of wine or beer in it was merely incidental, for the accommodation of such as might happen to decline to use ardent spirits.

Indeed it was well known to those who understand the subject, from experience or observation, that spirituous liquors was the principle thing sold or drank in groceries in most parts of the State, and that wines and beer were very little used formerly in the ordinary groceries or bar-rooms, as they were called. And although vinous or malt liquors was used in the tax laws in connection with spirituous liquors, it may
44 have been to prevent evasions of the tax law, the main object of which has been to tax heavily the sale of spirituous liquors in common use in the country. In former times, and to some extent at present, there were establishments of much more humble pretentions wherein spruce beer or cakes and beer of some sort, were sold, all of home manufacture. This sort of an establishment was not classed with the other, and did not pay an occupation tax. Of late years, and especially where our German citizens have resided, lager beer has been manufactured and sold in establishments, either in connection with or apart from the brewery; they are fitted up in reference to this business with mugs, round tables, and the like, and are not readily to be mistaken for an establishment for the sale of spirituous liquors. To a limited extent wines have also been made and sold in this State; and in our principal cities signs may be seen indicating the houses to be establishments for the sale of "Wine & beer," but most commonly for the sale of "Beer."

A drug store is an establishment where wines and alcohol have long been sold for medicinal purposes, and they do not pay an occupation tax unless spirituous liquors are sold in them, nor can they be classed with establishments for the sale of spirituous liquors, either in their outfit, appearance, or use.

The law of 1873 was passed in reference to such a state of things. The policy is plainly indicated that every establishment where spirituous liquors are sold shall pay an occupation tax, whether wines, beer, or medicine are sold there or not; that in a drug store wines and alcohol may be sold for medicinal purposes without the payment of an oc-
45 cupation tax, and that such establishments as are used to sell domestic wines & beer, or either, shall pay no occupation tax; the motive that prompted the exemption was in part from the fact that those who kept such establishments may have most usually manufactured the wine or the beer, especially the latter, which was sold in them, and partly, perhaps, both to encourage the manufacture and the use of them, rather than the use of ardent spirits. If a person should choose to have an establishment of this sort, for the sale of both foreign and domestic wines and beer, those imported from other States of the Union would be placed under a discrimination if he was required to pay an occupation tax because he sold such foreign wines or beer in his establishment. Such an establishment in which domestic wines and beer, or either, were sold, are expressly exempted from an occupation tax; and if in it wines or beer, imported from other States in the Union, were sold, it might be held that it also was exempt from an occupation tax under the Constitution of the United States. Under this construction the leading object of the statute passed to raise a revenue would be carried out by imposing an occupation tax upon all establishments for the sale of spirituous liquors, even drug-stores, and the establishments for the sale of wine or beer, or both, would be encouraged by being exempted, which encouragement was in part certainly the design of the legislature. The free sale of wines and beer imported from other States, in establishments fitted up for that purpose, would but very little interfere with the principal objects of the law, either in reference to the raising of revenue, or discouragement to their domestic manufacture, and would serve the evident pur-

46 pose of the law in encouraging the general use of wines and beer in preference to the use of spirituous liquors.

If it be held that the proviso exempting the sale of domestic wines and beer from taxation can be rejected, leaving the balance of the clause in force, two of the obvious objects of the law will be entirely defeated, to wit, the encouragement of the manufacture, and the preferred use of wine and beer rather than spirituous liquors. If it be held that but one establishment was contemplated by the law, embracing the sale of either spirituous liquors or wines or beer, or all together, then the main objects of the law will be defeated by its being contrary to the Constitution of the United States, and no revenue will be collected, and no encouragement will be given either to the manufacture or the use of wines or beer, or both, in preference to the use of spirituous liquors. It is therefore concluded that such construction should be given to the law as would come nearest to making it accomplish its different objects, and at the same time be conformable to the different sorts of business existing in the State which the law was intended to regulate in its scheme of taxation.

"In the construction of a statute every part of it must be viewed in connection with the whole, so as to make all parts of it harmonize if practicable, and give a sensible effect to each." Pot.'s Dwarris on Statutes, p. 144. "The presumption must always be in favor of the validity of the laws, unless the contrary is clearly demonstrated." Ib., 145. "It is the duty of courts to construe statutes so as to meet the mischief and to advance the remedy, and not to violate fundamental principles." Ib., 144.

47 It has ever been a fundamental principle in our legislation to impose a heavy tax upon the sale of spirituous liquors, not only to raise a revenue, but to check the excessive use of it.

Cotemporary practice is a circumstance which is connected with a law in time, and not only in time, but in place, too, for it consists in what was usually done in the place where the law was made, at or near the time of making it." Ib., 137. "It is competent for the court in interpreting the meaning and objects of a law, to find out and take into consideration the existing facts to which the law is intended to be applied, whether they consist of the ordinary acts of persons, or of the habits of business, relating to the subject-matter embraced within the law." Stearnes v. The State, 21 Tex. R., 705. "That which is implied in a statute is as much a part of it as what is expressed." Pot.'s Dw's on Stat., p. 145. The fact that in the section of the law in imposing an occupation tax it is said "that this section shall not be so construed as to include any wines or beer manufactured in this State," raises a necessary implication that there were establishments kept for the sale of wine or beer, or both, in which spirituous liquors were not sold, and which were intended to be provided for in the way of an exemption from occupation tax. And such implication is correspondent to existing facts that must have been known to the legislators when the law was enacted by them. If they had contemplated but one establishment in this section, then there could not possibly have been any exemption from the occupation tax in the sale of domestic wines and beer, as expressly provided for by the act.

48 The case Welton vs. The State of Missouri (1 Otto U. S. Rep. S. C., p. 275) is relied on as authority to maintain the proposition that this section of the tax law is contrary to the Constitution of the United States, and therefore void and inoperative for all purposes.

It may be authority to establish that the section is inoperative in so

far as it makes a discrimination against wine and beer imported from other States & sold in establishments in which wine and beer or either of them are alone sold, but not as to the occupation of selling spirituous liquors, which is made to pay a tax whether anything else is sold with it or not. That decision is made under the statute of Missouri, as follows, to wit: "Whoever shall deal in the selling of patent or other medicines, goods, wares, or merchandize, except books, charts, maps and stationary, which are not the growth, produce, or manufacture of this State, by going from place to place to sell the same, is declared to be a peddler." Other sections of the same law prohibits a person from selling as a peddler without license, and prescribes the rate of charge for license.

In this the legislature enacted a fiction, and founded a penal statute upon it. A peddler is a person who is a foot-trader, according to the original signification of the appellation, but by custom it has come to be a person who travels from place to place, and carries about with him, on his back or on horseback, or in a vehicle of some kind, articles of merchandize for sale where he goes. Such a person is a peddler in fact; and the law which declared that to be a peddler he must sell only articles manufactured out of the State, did not and could not
49 make one who, under similar circumstances, travelled about and sold articles manufactured within the State, other than a peddler in fact, although the legislature might cho'se not to embrace him in the legal definition of a peddler for the purposes of taxation. The legislature must have contemplated that there were or would be such persons travelling from place to place, and selling articles of merchandize manufactured within the State. Otherwise, they could confer no benefit or advantage upon any one by leaving out the definition of peddler, those who might be peddlers in fact, and not in law.

The real object of the law was to raise a tax upon peddlers, and it was so shaped as to impose the whole burden of the tax upon those peddlers who sold articles of merchandize manufactured out of the State, the necessary operation of which was to impose a tax upon the foreign articles so sold, to the advantage of similar articles manufactured within the State. The occupation of the peddlers was the same, whether they sold domestic or foreign manufactured articles of merchandize. The law does not make an occupation. That is made by the people, in their pursuits, habits, and modes of business. It cannot make one not a peddler who is so from his pursuits and occupation, although for a purpose relating to taxation it may give a restricted and inaccurate definition of what it takes to constitute a peddler. It is obvious that the object and operation of this law were to make a discrimination against foreign and in favor of domestic articles of merchandize when sold by peddlers. By this law persons were encouraged to engage in the occupation of peddler in the sale of domestic manufactures, which
50 business we may reasonably presume persons were engaged in at the time, just as by our law persons were encouraged to engage in the occupation of selling home-made beer, or wine, or both, in establishments in which spirituous liquors were not sold, as they existed at the time the law was passed, and before and since that time, and which have an outfit of furniture and other appliances, and are attended with habits and associations of persons entirely different from those establishments styled sometimes groceries, saloons, bar-rooms, or sample-rooms, whose principal object is, and always in this country has been, the sale of spirituous liquors, in which, the occupation tax being paid,

any other beverage may be sold, whether manufactured at home or abroad.

This case having been reversed and remanded at the late term of this court at Galveston, a motion for a rehearing was made by appellee. Thereupon the case with the motion was taken under advisement, and the judgment of this court suspended for the further order of the court, and the case with the motion transferred to Austin.

It is ordered that the motion for rehearing be granted, and that the judgment for reversal heretofore rendered and suspended be set aside; that the judgment of the district court herein be affirmed; that judgment accordingly be here rendered and transmitted with the papers of the cause to the court at Galveston to be there entered as of the late term of said court.

O. M. ROBERTS, *Ch. Jus.*

Filed July 11th, 1877.

N. J. MOORE,
Clerk Sup. C'rt., Galveston.

51 *Petition for writ of error.*

In supreme court of the State of Texas.

THE STATE OF TEXAS,
County of Galveston:

L. L. HIGGINS ET AL.
vs.
SELIM RINKER, COUNTY TREASURER. } Suit No. 843.

To the honorable Oran M. Roberts, chief justice of the supreme court of the State of Texas:

Your petitioners, Barny Tiernan and Patrick Tiernan, partners under the name of B. & P. Tiernan, Michael V. Cambiehl & Lippman Gros, partners under the name of Cambiehl & Gros, John M. Lains and Frank Giozza, partners under the name of J. M. Lains & Co., Laurence Nugent and John A. Fitzpatrick, partners under the name of Nugent & Fitzpatrick, Bernard Sbisa and James Orfila, partners under the name of Sbisa and Orfila, Moses Frieberg and Samuel Klien, partners under the name of Frieberg, Kleine & Co., Edwin E. Rice, doing business under the name of E. E. Rice & Co., James Henderson and John Grottsgar, partners under the name of Henderson and Grottsgar, Louis Romanet and Jules Girardin, partners under the name of Romanet & Girardin, Robert W. Saunders, doing business under the name of R. W. Saunders & Co., Theodore Arnold, John B. Borelly, Lorenzo Baulo, James H. Butcher, E. L. Bremond, James Cross, Ferdinand J. Carpentier,
52 John Carson, Martin A. Davey, George H. Dermeyer, Bartholomew Donovan, Victor Frank, Edward Garrett, Daniel Gillis, Joseph Fischl, Albert Hoppe, Louis L. Higgins, Margaret Hab, Christian Haehn, John A. Johnson, Lilly Jewell, John Kirker, Charles F. Kaiser, Fredericke W. Klitzing, Eugene D. Latour, Charles Lossen, Mat. Lossen, Ferreola Micholet, August McDonald, James McFadden, George C. Rains, Carl Shilling, August Single, Joseph Trave, Francois Tojan, Frederick Wolff, Henry Walken, William Wenzlow, Jacob Block, Charles Dalian, Alphonse Dreyfus, William B. Hough, Theodore Kleinecke, James F. Magale, Ambrose Tonella, Adolph Starwinski and

Aristide Foruola, Maggie A. Mitchell, Francoise Trave, Fritz Thusfield, and Doratin Tolex, respectfully represent, that on the 8th day of June, 1877, at Austin, a final judgment was rendered by the supreme court of the State of Texas in favor of Selim Rinker in his official capacity of county treasurer of the county of Galveston, and against your petitioners, in a certain suit therein pending on appeal from Galveston County, wherein the said county treasurer was appellee and your petitioners were appellants, the number of said suit being 843 on the docket of said supreme court.

Your petitioners represent, that in said suit the validity of a statute of the State of Texas was drawn in question on the ground of its being repugnant to the Constitution of the United States, and the decision of said supreme court is in favor of its validity, in which decision your petitioners complain there is error, to their great damage.

53 Your petitioners represent that the county treasurer of Galveston County is now by name one Theodore K. Thompson.

Your petitioners pray that your honor will allow the writ of error herewith submitted, and will sign the citation in error herewith submitted, and will approve the writ of error bond herewith submitted, and as in duty bound your petitioners will ever pray.

L. E. TREZVANT,
Attorney for Petitioners.

Endorsement, Ch. Just. O. M. Roberts.

The question of the constitutionality of the law of this State involved in this case being fairly made in the record, the writ of error herein prayed for is hereby granted, that our decision may be reviewed by the Supreme Court of the United States. This the 18th of August, 1877.

O. M. ROBERTS,
Chief Justice of the Supreme Court of the State of Texas.

The foregoing petition for writ of error, with endorsement thereon of Ch. Jus. Roberts, filed Aug'st 28th, 1877.

N. J. MOORE, *Clerk.*

54 CLERK'S OFFICE, SUPREME COURT OF TEXAS,
At Galveston, October 8th, 1877.

I, N. J. Moore, clerk of the supreme court of Texas, at Galveston, do hereby certify the preceding three pages to be a true and correct copy of the original petition for writ of error in the case of L. L. Higgins et als., appellants, vs. Selim Rinker, appellee, now on file in this office.

Witness my hand and the seal of the said court, at the city of Galveston, this the 8th day of October, A. D. 1877.

[SEAL.] N. J. MOORE,
Clerk Supreme Court of Texas, at Galveston.

55 THE UNITED STATES OF AMERICA:

The President of the United States to the honorable the supreme court of the State of Texas, greeting:

Because in the record and proceedings, and also in the rendition of the judgment of a plea which is in the said supreme court of the State of Texas, before you, being the highest court of law or equity of the said State in which a decision could be had in the said suit, the file number of which suit is 843, between Selim Rinker, in his official capacity of

county treasurer of the county of Galveston, who was the appellee in said suit, and the following named persons, who were the appellants in said suit, to wit, Barny Tiernan and Patrick Tiernan, partners under the name of B. & P. Tiernan, Michael V. Cambiehl, and Lippman Gros, partners under the name of Cambiehl & Gros; John M. Lains and Frank Giozza, partners under the name of J. M. Lains & Co.; Laurence Nugent and John A. Fitzpatrick, partners under the name of Nugent & Fitzpatrick; Bernard Sbisa and James Orfila, partners under the name of Sbisa & Orfila; Moses Frieberg and Samuel Klein, partners under the name of Frieberg, Klein & Co.; Edwin E. Rice, doing business under the name of E. E. Rice & Co.; James Henderson and John Gottgar, partners under the name of Henderson & Gottgar; Louis Romonet and Jules Giradin, partners under the name of Romonet & Giradin; Robert W. Sanders, doing business under the name of R. W. Sanders & Co.; Theodore Arnold, John B. Borelly, Lorenzo Baulo, James H Butcher, E. L. Bremond, James Cross, Ferdinand J. Carpentier, John Carson, Martin A. Davey, George H. Dirmeyer, Bartholomew Donovan, Victor Frank, Edward Garrett, Daniel Gillies, Joseph Fischl, Albert Hoppe, Louis L. Higgins, Margaret Hab, Christian Haehn, John A. Johnson, Lillie Jewell, John Kirker, Charles F. Kaiser, Frederick W. Kitzing, Eugene D. Latour, Charles Lossen, Matt Lorson, Ferrole Micholet, Angus McDonald, James McFadden, George C. Rains, Carl Schilling, August Single, Joseph Trave, Francois Tajan, Frederick Wolff, Henry Wolken, William Wurzlow, Jacob Block, Charles Dalian, Alphonse Dreyfus, William B. Hough, Theodore Kleinecke, James F. Magale, Ambrose Tonella, Adolph Stawinski and Aristide Foruola, Maggie A. Mitchell, Francois Trave, Fritz Thusfield, and Doratu Tolex;

Wherein was drawn in question the validity of a statute of said State, on the ground of its being repugnant to the Constitution, treaties, or laws of the United States, and the decision was in favor of such its validity, a manifest error has happened, to the great damage of the above-named persons, who were the appellants in said suit, as by their complaint appears. We being willing that the error, if any hath been, should be duly corrected, and full and speedy justice done to the parties aforesaid in this behalf, do command you, if judgment be therein
56 given, that then under your seal, distinctly and openly, you send the record and proceedings aforesaid, with all things concerning the same, to the Supreme Court of the United States, together with this writ, so that you may have the same at Washington on the second Monday of October next, in the said Supreme Court to be then and there held, that the record of proceedings aforesaid being inspected, the said Supreme Court may cause further to be done therein to correct that error, what of right, and according to the laws and customs of the United States, should be done.

Witness the honorable Morrison R. Waite, Chief Justice of the said Supreme Court, the 26th day of July, in the year of our Lord one thousand eight hundred and seventy-seven.

[SEAL.]

C. DART,
Clerk U. S. Circ't Court, Eastern District of Texas, at Galveston.

THE STATE OF TEXAS,
County of Smith:
Granted 18th of August, 1877.

O. M. ROBERTS,
Ch. Jus. Sup. Co. Texas.

(Indorsed:) No. 843. L. L. Higgins et al. vs. County Treasurer of Galveston County. Writ of error. Filed August 28th, 1877. N. J. Moore, clerk supreme court of Texas, at Galveston.

57 UNITED STATES OF AMERICA, *ss:*

To the county treasurer of the county of Galveston, in the State of Texas, greeting:

You are hereby cited and admonished to be and appear at a Supreme Court of the United States, to be holden at Washington, on the second Monday of October next, pursuant to a writ of error issued on the 26th day of July, A. D. 1877, from the clerk's office of the circuit court of the United States for the eastern district of Texas, wherein the following named persons are plaintiffs in error, to wit, Barny Tiernan and Patrick Tiernan, partners under the name of B. & P. Tiernan, Michael V. Cambiehl and Lippman Gros, partners under the name of Cambiehl & Gros, John M. Lains and Frank Giozza, partners under the name of J. M. Lains & Co., Laurence Nugent and John H. Fitzpatrick, partners under the name of Nugent & Fitzpatrick, Bernard Sbisa and James Orfila, partners under the name of Sbisa & Orfila, Moses Frieberg and Samuel Klein, partners under the name of Frieberg, Klein & Co., Edwin E. Rice, doing business under the name of E. E. Rice & Co., James Henderson and John Grottsgar, partners under the name of Henderson & Grottsgar, Louis Romonet and Jules Giradin, partners under the name of Romonet & Giradin, Robert W. Sanders, doing business under the name of R. W. Sanders & Co., Theodore Arnold, John B. Borelly, Lorenzo Baulo, James H. Butcher, E. L. Bremond, James Cross, Ferdinand J. Carpentier, John Carson, Martin A. Davey, George H. Dirmeyer, Bartholomew Donovan, Victor Frank, Edward Jarrett, Daniel Gillies, Joseph Fischl, Albert Hoppe, Louis L. Higgins, Margaret Hale, Christian Haehn, John A. Johnson, Lillie Jewell, John Kirker, Charles F. Kaiser, Frederick W. Klitzing, Eugene D. Latour, Charles Lossen, Matt Lorson, Fereole Micholet, Angus McDonald, James McFadden, G'orge C. Rains, Carl Schilling, August Single, Joseph Trave, Francois Tajan, Frederick Wolff, Henry Wolken, William Wurzlow, Jacob Block, Charles Dalian, Alphonse Dreyfus, William B. Hough, Theodore Kleinecke, James F. Magale, Ambrose Tonella, Adolph Stawinski and Aristide Foruola, Maggie A. Mitchell, Francois Trave, Fritz Thusfield, and Doratu Tolex, and you in your official capacity of county treasurer of Galveston County are the defendant in error, to show cause, if any there be, why the judgment in the said writ of error mentioned should not be corrected and speedy justice should not be done to the parties in that behalf.

Given under my hand this the 18th day of August, A. D. 1877.

O. M. ROBERTS,
Ch. Jus. Sup. Co. Texas.

58 THE STATE OF TEXAS,
County of Galveston:

Before me, the undersigned authority, this day personally appeared C. B. Franklin, and made oath that on the 30th day of August, A. D. 1877, he delivered to Theodore K. Thompson in his official capacity of county treasurer of Galveston County, in the State of Texas, and to Messrs. Ballinger, Jack & Mott as attorneys of record in the cause in which the above and foregoing citation in error is issued, a true copy of the above and foregoing citation in error, one copy being delivered to

the said county treasurer of Galveston County, and one copy being delivered to said attorneys of record.

C. B. FRANKLIN.

Sworn to an' subscribed before me this the 30th day of August, A. D. 1877.

N. J. MOORE,
Clerk of the Supreme Court of Texas at Galveston.

(Indorsed:) No. 843. L. L. Higgins et al. vs. The County Treasurer of Galveston County. Citation in error. Filed August 28th, 1877. N. J. Moore, clerk supreme court of Texas at Galveston.

59 *Writ of error bond.*

Supreme Court of the United States.

L. L. HIGGINS ET AL.
vs.
SELIM RINKER, COUNTY TREASURER. } No. 843.

Know all men by these presents that whereas the persons hereafter named *are* designated as plaintiffs in error, have prosecuted a writ of error to the Supreme Court of the United States to reverse a judgment rendered by the supreme court of the State of Texas at the January term, 1877, thereof, in favor of Selim Rinker in his official capacity of county treasurer of the county of Galveston, in the State of Texas, and against the persons hereinafter named and designated as plaintiffs in error, to wit, Barny Tiernan and Patrick Tiernan, partners under the name of B. & P. Tiernan, Michael V. Cambiehl and Lippman Gros, partners under the name of Cambiehl & Gros, John M. Laines and Frank Giozza, partners under the name of J. M. Laines & Co., Laurence August and John A. Fritzpatrick, partners under the name of August & Fritzpatrick, Bernard Sbisa and James Orfila, partners under the name of Sbisa and Orfila, Moses Freiberg and Samuel Klein, partners under the name of Freiberg, Kleine & Co., Edwin E. Rice, doing business under the name of E. E. Rice & Co., James Henderson and John Grottgar, partners under the name of Henderson & Grottgar, Louis Romanet and Jules Girardin,
60 partners under the name of Romanet & Girardin, Robert M. Saunders, doing business under the name of R. W. Saunders & Co., Theodore Arnold, John B. Borelly, Lorenza Baulo, James H. Butcher, E. L. Bremond, James Cross, Ferdinand J. Carpenter, John Carson, Martin N. Davey, George H. Dermeyer, Bartholomew Donovan, Victor Frank, Edward Garrett, Daniel Gillies, Joseph Fischl, Albert Hoppe, Louis L. Higgins, Margaret Hab, Christian Hoehm, John A. Johnson, Lilly Jewell, John Kirker, Charles F. Kaiser, Frederick W. Klitzing, Eugene D. Latour, Charles Lossen, Mat Lorson, Ferrèole Micholet, August McDonald, James McFadden, George C. Rains, Carl Schilling, August Single, Joseph Trave, Francois Tojan, Fredericke Wolff, Henry Wolken, William Wirzlow, Jacob Block, Charles Dalian, Alphonse Dreyfus, William B. Hough, Theodore Kleenecke, James F. Magale, Ambrose Tonella, Aldoph Stawinski and Aristide Forirola, Maggie A. Mitchell, Francois Trave, Fritz Thurfeldt and Doratu Tolex, said judgment having been rendered on the eighth day of June, 1877, at Austin, upon the motion of said county treasurer for a rehearing, and ordered to be transmitted with the papers of the cause to the supreme court at Galveston, to be

there entered as of the late term of said court, the number of said cause in which said judgment was rendered being 843 on the docket of the supreme court at Galveston; and whereas Theodore K. Thompson is now the county treasurer of Galveston County: Now, therefore, we, the above-named persons designated above as plaintiffs in error,
61 as principals, and George Schneider and Isaac Heidenheimer, as their sureties, are held and firmly bound unto the said Theodore K. Thompson, in his official capacity of county treasurer of the county of Galveston, in the State of Texas, and to his successors in office, in the sum of four hundred dollars, to be paid to the county treasurer of Galveston County, in the State of Texas, to which payment we bind ourselves and each of us, jointly and severally, and our and each of our heirs and legal representatives, firmly by these presents.

The condition of this obligation is such that if the above-named plaintiffs in error shall prosecute their said writ of error to effect, and answer all costs if they shall fail to make good their plea, then this obligation shall be void, otherwise to remain in full force and virtue. In witness whereof the said sureties subscribe their names and affix their seals, using scrolls for seals, this 25th day of July, 1877.

GEO. SCHNEIDER. [SEAL.]
I. HEIDENHEIMER. [SEAL.]

Approval.—Ch. Just. Roberts.

Approved as a cost bond only, 18th August, 1877.

O. M. ROBERTS,
Ch. Jus. Sup. Co. Texas.

Affidavit of bondsmen.

THE STATE OF TEXAS,
County of Galveston:

Before the undersigned authority, this day came George Schnei-
62 der and Isaac Heidenheimer, who are the sureties in the above and foregoing writ of error bond, and each of them subscribed his name to and was sworn before me to the following oath, to wit:

I do swear that I am worth in my own right at least the sum of four hundred dollars after deducting from my property all that which is exempt by the constitution and laws of this State from forced sale, and after the payment of all my debts of every description, whether individual or security debts, and after satisfying all incumbrances upon my property which are known to me; that I reside in Galveston County, Texas, and have property in this State liable to execution worth the sum of four hundred dollars or more.

GEO. SCHNEIDER.
I. HEIDENHEIMER.

Authentication of affidavit.

Sworn to and subscribed before me, John S. Shields, a notary public in and for the county of Galveston, this 25th day of July, A. D. 1877.

Given under my hand and official seal at my office, in the city of Galveston, this 25th day of July, A. D. 1877.

[SEAL.]

JNO. S. SHIELDS,
Notary Public for Galveston County.

Foregoing writ of error bond filed August 28th, 1877.

N. J. MOORE, *Clerk.*

63 CLERK'S OFFICE SUPREME COURT OF TEXAS,
At Galveston, October 8th, 1877.

I, N. J. Moore, clerk of the supreme court of Texas, at Galveston, do hereby certify the preceeding four pages to be a true and correct copy of the original writ of error bond in the case of L. L. Higgins et als., appellants, vs. Selim Rinker, appellee, now on file in this office.

Witness my hand and the seal of the said court, at the city of Galveston, this the 8th day October, A. D. 1877.

[SEAL.] N. J. MOORE,
Clrk Sup Crt of Tex., at Galveston.

64 CLERK'S CFFICE SUPREME COURT OF TEXAS,
At Galveston, Oct'r 8th, 1877.

I, N. J. Moore, clerk of the supreme court of Texas, at Galveston, do hereby certify the preceeding sixty-three pages of transcript to contain a true copy of the record, and of all proceedings had in the cause lately pending in said court numbered 843, wherein L. L. Higgins et als. were appellants, and Selim Rinker appellee, together with the original writ of error and original citation in error filed in said cause.

Witness my hand and the seal of the said court, at the city of Galveston, this 8th day of October, A. D. 1877.

[SEAL.] N. J. MOORE,
Clerk Supreme Court of Tex., at Galveston.

(Indorsement on cover:) No. 303. Barney Tiernan and Patrick Tiernan, partners as B. and P. Tiernan, and L. L. Higgins, et al., pl'ffs in error, vs. Selim Rinker, as the county treasurer of the county of Galveston, Texas. Texas sup. court. Filed 15th October, 1877.

there entered as of the late term of said court, the number of said cause in which said judgment was rendered being 843 on the docket of the supreme court at Galveston; and whereas Theodore K. Thompson is now the county treasurer of Galveston County: Now, therefore, we, the above-named persons designated above as plaintiffs in error,
61 as principals, and George Schneider and Isaac Heidenheimer, as their sureties, are held and firmly bound unto the said Theodore K. Thompson, in his official capacity of county treasurer of the county of Galveston, in the State of Texas, and to his successors in office, in the sum of four hundred dollars, to be paid to the county treasurer of Galveston County, in the State of Texas, to which payment we bind ourselves and each of us, jointly and severally, and our and each of our heirs and legal representatives, firmly by these presents.

The condition of this obligation is such that if the above-named plaintiffs in error shall prosecute their said writ of error to effect, and answer all costs if they shall fail to make good their plea, then this obligation shall be void, otherwise to remain in full force and virtue. In witness whereof the said sureties subscribe their names and affix their seals, using scrolls for seals, this 25th day of July, 1877.

GEO. SCHNEIDER. [SEAL.]
I. HEIDENHEIMER. [SEAL.]

Approval.—Ch. Just. Roberts.

Approved as a cost bond only, 18th August, 1877.

O. M. ROBERTS,
Ch. Jus. Sup. Co. Texas.

Affidavit of bondsmen.

THE STATE OF TEXAS,
County of Galveston:

Before the undersigned authority, this day came George Schnei-
62 der and Isaac Heidenheimer, who are the sureties in the above and foregoing writ of error bond, and each of them subscribed his name to and was sworn before me to the following oath, to wit:

I do swear that I am worth in my own right at least the sum of four hundred dollars after deducting from my property all that which is exempt by the constitution and laws of this State from forced sale, and after the payment of all my debts of every description, whether individual or security debts, and after satisfying all incumbrances upon my property which are known to me; that I reside in Galveston County, Texas, and have property in this State liable to execution worth the sum of four hundred dollars or more.

GEO. SCHNEIDER.
I. HEIDENHEIMER.

Authentication of affidavit.

Sworn to and subscribed before me, John S. Shields, a notary public in and for the county of Galveston, this 25th day of July, A. D. 1877.

Given under my hand and official seal at my office, in the city of Galveston, this 25th day of July, A. D. 1877.

[SEAL.]

JNO. S. SHIELDS,
Notary Public for Galveston County.

Foregoing writ of error bond filed August 28th, 1877.

N. J. MOORE, *Clerk.*

63 CLERK'S OFFICE SUPREME COURT OF TEXAS,
At Galveston, October 8th, 1877.

I, N. J. Moore, clerk of the supreme court of Texas, at Galveston, do hereby certify the preceeding four pages to be a true and correct copy of the original writ of error bond in the case of L. L. Higgins et als., appellants, vs. Selim Rinker, appellee, now on file in this office.

Witness my hand and the seal of the said court, at the city of Galveston, this the 8th day October, A. D. 1877.

[SEAL.] N. J. MOORE,
Clrk Sup C'rt of Tex., at Galveston.

64 CLERK'S CFFICE SUPREME COURT OF TEXAS,
At Galveston, Oct'r 8th, 1877.

I, N. J. Moore, clerk of the supreme court of Texas, at Galveston, do hereby certify the preceeding sixty-three pages of transcript to contain a true copy of the record, and of all proceedings had in the cause lately pending in said court numbered 843, wherein L. L. Higgins et als. were appellants, and Selim Rinker appellee, together with the original writ of error and original citation in error filed in said cause.

Witness my hand and the seal of the said court, at the city of Galveston, this 8th day of October, A. D. 1877.

[SEAL.] N. J. MOORE,
Clerk Supreme Court of Tex., at Galveston.

(Indorsement on cover:) No. 303. Barney Tiernan and Patrick Tiernan, partners as B. and P. Tiernan, and L. L. Higgins, et al., pl'ffs in error, vs. Selim Rinker, as the county treasurer of the county of Galveston, Texas. Texas sup. court. Filed 15th October, 1877.

FILED
OCT 11 1880
JAMES H. MAKENNEY, CLERK

SUPREME COURT OF THE UNITED STATES

No. 45.

B. & P. TIERNAN, L. L. HIGGINS, et als.,
PLAINTIFFS IN ERROR,

vs.

SELIM RINKER AS COUNTY TREASURER OF GALVESTON COUNTY, TEXAS,
DEFENDANT IN ERROR.

Writ of Error to the Supreme Court of the State of Texas.

BRIEF OF PLAINTIFFS IN ERROR.

A H Willie

COUNSEL FOR PLAINTIFFS IN ERROR.

Shaw & Blaylock, Printers, Galveston.

SUPREME COURT OF THE UNITED STATES

No. 45.

B. & P. TIERNAN, L. L. HIGGINS, et als.,
PLAINTIFFS IN ERROR,

vs.

SELIM RINKER AS COUNTY TREASURER OF GALVESTON COUNTY, TEXAS,
DEFENDANT IN ERROR.

Writ of Error to the Supreme Court of the State of Texas.

BRIEF OF PLAINTIFFS IN ERROR.

STATEMENT OF THE CASE.

The plaintiffs in error, Louis L. Higgins, B. & P. Tiernan, James Cross and others, being a large number of distinct persons uniting in one suit, by their petition filed in the District Court for Galveston County, in the State of Texas, sued out on the 31st May, 1876, a writ of injunction, whereby the County Treasurer of Galveston county, then one Selim Rinker, was enjoined until the further order of said Court from collecting from each one of the complainants a certain occupation tax levied by the County Court of Galveston county, for the year 1876, upon all persons pursuing in said county the occupation of selling spirituous, vinous, malt and other intoxicating liquors in quantities less than one quart; also a certain occupation tax levied by said Court for the same period upon all persons pursuing the occupation of selling such liquors in quantities of one quart and less than ten gallons.

Some of the plaintiffs in error—a large majority of them—were pursuing the occupation of selling the above named liquors in quantities less than one quart; the remainder were pursuing the occupation of selling such liquors in quantities of one quart and less than ten gallons when the County Treasurer was proceeding to collect said taxes from them by a seizure and sale of their property, and was enjoined as above stated.

The tax in question is one-half of the amount as levied by the State of Texas under a Statute entitled "An Act, Regulating Taxation," approved June 3d, 1873.

This Statute, hereinafter recited, levied a tax of $200 upon all persons pursuing the occupation of selling the above named liquors in quantities less than one one quart; in quantities of one quart and less than ten gallons, a tax of $100. This Statute provides that it shall not be so construed as to include any wines or beer manufactured in the State of Texas.

Plaintiffs in error allege in their petition among other things that they were pursuing the above named occupations during the year 1879, and that the wines and beer in the sale of which they were engaged were not of the manufacture of the State of Texas, but were of the manufacture of other States of the American Union and of foreign nations, and that the Statute in question, in so far as it imposed said taxes, was repugnant to the constitution of the United States, and that the taxes levied by the County Court under said Statute were unconstitutional and illegal, and that the County Treasurer was proceeding to seize and sell the property of complainants for the collection of said taxes levied by said County Court, and prayed for the writ of injunction to restrain him from so doing.

By supplemental petition, filed August 1, 1876, other persons pursuing said occupations joined in and became parties plaintiff in the suit. Under this supplemental petition a second writ of injunction of same purport as the first was issued August 4, 1876.

Plaintiffs filed August 5, 1876, an amended petition charging again and more specifically the unconstitutionality of the Statute.

Defendant filed a general demurrer to plaintiffs' petition; this demurrer was sustained by the Court; the writs of injunction were dissolved, and plaintiffs' petitions were dismissed at their costs.

Plaintiffs appealed from this judgment to the Supreme Court of the State of Texas.

The Supreme Court reversed the judgment of the District Court and remanded the cause for further proceedings in accordance with the opinion of the Supreme Court.

Defendant filed a motion for rehearing in the Supreme Court; rehearing was granted and the judgment of the District Court was affirmed; Justice Moore dissenting.

Plaintiffs in error sued out a writ of error to this Court, and now pray for a reversal of the judgment of the Supreme Court of the State of Texas, and make the following

ASSIGNMENT OF ERRORS.

The Supreme Court erred in holding that the Statute in question was not in conflict with Sec. 8 ¶ 3 and Sec. 10 ¶ 2 of Art. 1 of the constitution of the United States, and in affirming the judgment of the District Court upon the demurrer.

BRIEF OF THE ARGUMENT.

The Statute, the validity of which is drawn in question, is as follows:

SEC. 3. That there shall be levied on and collected from every person, firm or association of persons, pursuing any of the following named occupations an annual tax, (except when herein otherwise provided,) on every such occupation or separate establishment, as follows: For selling spirituous, vinous, malt, and other intoxicating liquors, in quantities less than one quart, two hundred dollars; in quantities of a quart and less than ten gallons, one hundred dollars; provided that this section shall not be so construed as to include any wines or beer manufactured in this State, or when sold by druggists for medicinal purposes; and provided further that this section shall not be so construed as to authorize druggists to sell spirituous or intoxicating liquors, except alcohol. For selling in quantities of ten gallons and over, one hundred dollars.

SEC. 4. That the County Courts of the several counties of this State shall have the power of levying taxes equal to the one-half of the amount of the State tax herein levied, except as hereinbefore provided; and provided further that any one wishing to pursue any of the vocations named in this act for a less period than one year may do so by paying a pro rata amount of such occupation for the period he may desire; provided further that no occupation license shall issue for a less period than three months; and provided further that the receipt of the proper officer shall be *prima facie* evidence of the payment of such tax.

Plaintiffs in error allege in their petitions that they were pursuing the occupations defined in the above recited Statute, and that the wines and beer in the sale of which they were engaged were not of the manufacture of the State of Texas, but were of the manufacture of other States of the United States of America and of foreign nations. (Print Rec. pp. 2, 7.)

Plaintiffs in error submit the following propositions:

The subject of the tax, by the enacting clause of the Statute in question, is that class of persons engaged in the pursuit of a given occupation; that occupation is defined to be the selling of spirituous, vinous, malt, and other intoxicating liquors.

The subject of the tax under the first proviso of the Statute is that class of persons engaged in the occupation of selling vinous and malt liquors not of the manufacture of the State of Texas, and of spirituous and other intoxicating liquors.

Plaintiffs in error are alleged to be of the last named class.

The effect of this proviso is that a discrimination is made in favor of Texas wines and beer, and against those liquors the product of other States and of foreign nations; the Statute is, therefore, a regulation of commerce and repugnant to Sec. 8, 3, of Art. 1, of the Constitution of the United States, and the demurrer to plaintiffs' petition ought to have been overruled.

Welton vs. Missouri, 96 U. S., p. 275.
Hinson vs. Lott, 8 Wallace, p. 148.
Cook vs. Pennsylvania, 97 U. S., p. 566.
Gay vs. Baltimore, S. C. U. S., March, 1880.

The proviso is an essential part of the Statute. The office of the proviso is, says Marshall, Ch. J., in Wayman vs. Southard, 10 Wheat 1, is to restrain the enacting clause and to except something which would otherwise have been within it, or, in some measure, to modify the enact-

ing clause. We can no more cut out terms or mitigate their legal effect, because they are in a proviso, says Woodward J., in Dugan vs. Bridge Co., 27 Penn. St. 310, than we can qualify the terms of a private agreement, because found in one part of the instrument instead of another.

To strike out the proviso in question as unconstitutional, because of the discrimination, and yet sustain the Statute as imposing the tax upon the sale of spirituous, vinous. malt and other intoxicating liquors indifferently, would be to legislate and to defeat the obvious intention of the law-makers, to-wit: The encouragement of the manufacture of Texas wines and beer.

Where a Statute is clearly made up of parts, sections or provisions, one part will not be held good and another bad, unless the respective parts are independent of each other.

The State vs. Commissioners of Perry county, 5 Ohio St., 507.

Potters Dwarris, 249.

The constitutional part can stand only when, after rejecting the unconstitutional part, the object and effect of the law is not destroyed.

State vs. Estabrook, 3 Nevada, 180.

The whole must fall, if, after rejecting the unconstitutional part, that which remains is incapable of being executed in accordance with the apparent legislative intent.

Cooley's Const, Lim., 178.

Washington vs. the State, 13 Ark., 763.

Where the different portions of a Statute form inseparable parts of the same system, the whole is invalidated by the unconstitutionality of a part.

People vs. Detroit, 29 Mich., 108.

Sedgwick on Stat. Law, 414, and cases cited.

It is evident that the purpose of this Statute is to tax the selling of spiritucus, vinous and malt liquors; it is also evident that the purpose of this Statute is to exempt from this tax the selling of Texas wines and beer, and thus to encourage their manufacture. Can this Court assume from the terms of this Statute that the building up of a Texas industry in the manufacture of wines and beer was not a moving consideration in the mind of the legislator in the enactment of this Statute? It is evident from the terms of the Statute that the raisiug of revenue and the encouragement of the manufacture of Texas wines and beer are inseparable parts of the same system; are intended as a whole, and that if any part of the Statute be stricken out, the remainder of the Statute is incapable of being executed in accordance with the apparent legislative intent. It is submitted that the tax must either stand as a whole and as within the competency of the legislature to impose as laid; or it must fall as a whole and as a regulation of commerce which the legislature has no power to make.

It was claimed by defendant that, since the Statute makes no discrimination as to spirituous liquors, plaintiffs in error had no cause to complain; to this the Court replied: Justice Moore delivering the opinion (Print. Rec., p. 16), "this would be true, if the Court could separate the constitutional from the unconstitutional part of the Statute, so as to give effect to the former without doing violence to the intention of the legislature. But the tax for the license is indivisible; the license is for the exercise of a single and indivisible occupation, though different articles may be sold by persons to whom a license is granted; and we cannot, without exercising legislative power, say that the same amount should

be paid for the selling of spirituous liquors as for the selling of spirituous, vinous and malt liquors."

Plaintiffs in error insist further that the Statute in question is in conflict with Art. 1, Sec. 8, ¶ 2, of the Constitution of the United States, which prohibits any State from laying any duties upon imports.

For a State to lay a discriminating tax upon articles of merchandise, because of their foreign origin, is the same, in principle, as to lay a duty upon imports.

There is no difference in principle between laying a duty before an article is imported, and the imposing a discriminating tax which, after its importation and incorporation into the mass of the property of the State, prevents its sale.

The State vs. North, 27 Mo., 464.

A. H. Willis

Counsel for Plaintiffs in Error.

12-128

TRANSCRIPT OF RECORD.

SUPREME COURT OF THE UNITED STATES.

No. ~~228.~~ 29

HOSEA BALL AND MARGARET HAUGHERY, APPELLANTS,

vs.

JUSTIN LANGLES AND N. A. BAUMGARDEN, COMPOSING THE FIRM OF BAUMGARDEN & LANGLES.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE DISTRICT OF LOUISIANA.

FILED OCTOBER 5, 1877.

SUPREME COURT OF THE UNITED STATES.

No. 228.

HOSEA BALL AND MARGARET HAUGHERY, APPELLANTS,

vs.

JUSTIN LANGLES AND N. A. BAUMGARDEN, COMPOSING THE FIRM OF BAUMGARDEN & LANGLES.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE DISTRICT OF LOUISIANA.

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1 UNITED STATES OF AMERICA:

Circuit court of the United States in and for the fifth circuit and district of Louisiana. In equity.

HOSEA BALL ET ALS., COMPLAINANTS,
vs.
JAMES HALL ET ALS., DEFENDANTS.
No. 6811.

Bill of complaint.—Filed October 19th, 1872.

Circuit court of the United States, fifth judicial circuit & district of Louisiana. In equity.

To the honorable the judges of the circuit court of the United States for the fifth judicial circuit and district of Louisiana:

Hosea Ball, of the city, county, and State of New York, and Mrs. Margaret Haughery, widow, residing in New Orleans, Louisiana, bring this their bill of complaint against James Hall, resident in Cin-
2 cinnati, State of Ohio, and N. A. Baumgarden and Justin Langles, composing the commercial firm of Baumgarden & Langles, domiciled and doing business in New Orleans aforesaid, and both citizens of Louisiana and resident in New Orleans.

And thereupon your orator and oratrix complain and say that before the twenty-third day of September, 1856, your orator Hosea Ball, was the original and first inventor of a certain new and useful improvement in ovens, which had not been known or used before his invention thereof, and which was not, at the time of his application for a patent therefor, in public use or on sale with his consent or allowance; and the said Ball being a citizen of the United States, and having made due application and having fully complied with all the requirements of the law in that behalf, he obtained letters patent therefor, issued to him in due form of law by the proper department of the Government of the United States, bearing date the twenty-third day of September, 1856, and granting to your orator, the said Hosea Ball, his heirs, executors, administrators, and assigns, for the term of fourteen years from the
3 said date, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvements therein specified, which improvements are fully set forth in the schedule annexed to said letters patent, as by reference to said letters patent (which, or a certified copy of which, your orator and oratrix are ready to produce in court) will more fully and at large appear.

And your orator and oratrix further show unto your honors that before the expiration of the original term of said letters patent, to wit, on March 22d, 1869, your orator Hosea Ball, by an instrument in writing of that date, contracted and agreed with your oratrix Margaret Haughery, for a valuable consideration therein mentioned, to convey, and did convey, sell, grant and assign to her, the said Margaret Haughery, her heirs, executors, administrators, and assigns, all his right, title, interest, and privileges in and to the said letters patent for the aforesaid improvements (numbered 15753, and dated as before mentioned), which your said orator then held, or might thereafter become possessed
4 of by virtue of a reissue of said letters patent, for or an extension thereof, in and for the city of New Orleans aforesaid and for an area of fifty miles around and adjoining said city, which agreement

was duly recorded in the Patent Office on March 23d, 1869, as by the same or certified copy thereof from said office will fully appear.

And your orator and oratrix further show unto your honors that upon due application therefor, and due proceedings had according to the acts of Congress, the Commissioner of Patents did, on the 12th day of October, 1869, renew and reissue the said letters patent to extend to and to expire on September 23d, 1870; and that said reissued letters patent covered and included said new and useful improvements in ovens, with amended specifications and claims, and granted to your orator, Hosea Ball, his heirs, executors, administrators, and assigns, until September 23d, 1870, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvements therein specified; which improvements are fully set forth in the
5 schedule annexed to the said reissued letters patent, as by reference to said last mentioned letters patent, numbered 3666 (which, or a certified copy of which, your orator and oratrix are ready to produce in court), will more fully and at large appear.

And your orator and oratrix further show unto your honors that before the expiration of the term of the said reissued letters patent, to wit, on June 13th, 1870, your orator Hosea Ball, by an instrument in writing of that date, contracted and agreed with your oratrix Margaret Haughery, for a valuable consideration therein mentioned, to convey, and did convey, sell, grant, and assign to her, the said Margaret Haughery, her heirs, executors, administrators, and assigns, all his right, title, privileges and interests in and to said letters patent issued and reissued as aforesaid, and as before described, which your orator Ball then held or might thereafter become possessed of by virtue of a reissue or renewal of said letters patent, or for an extension thereof, in and for the State of Texas, and in and for a certain other territory composed of the town of Shreveport, in the State of Louisiana, and a radius or circle of fifty
6 miles in, around, and about said town of Shreveport, the said town of Shreveport being the centre of said circle, which agreement was duly recorded in the Patent Office on June 18th, 1870, as by the same or a certified copy thereof from said office will fully appear.

And your orator and oratrix further show unto your honors that upon due application therefor, and due proceedings had according to the acts of Congress, the Commissioner of Patents did, on the fourteenth day of June, 1870, renew and reissue the said letters patent to extend to and to expire on September 23d, 1870; and that said reissued letters patent covered and included said new and useful improvements in ovens, with amended specifications and claims, and granted to your orator Hosea Ball, his heirs, executors, administrators, and assigns, until September 23d, 1870, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvements therein specified, which improvements are fully set forth in the schedule annexed to the said reissued letters patent, as by reference to said last-mentioned letters patent, numbered 4026 (which, or a certified copy of which, your orator and oratrix are ready to produce in
7 court), will more fully and at large appear.

And your orator and oratrix further show unto your honors, that upon due application therefor, and due proceedings had according to the acts of Congress, the Commissioner of Patents did, on the 23d day of September, 1870, renew and extend the said letters patent so and as aforesaid reissued, for the term of seven years from and after the expiration of the first term thereof, to wit: from September twenty-third, 1870; and that said renewal and extension covered and

included said new and useful improvements in ovens, with specifications and claims in the aforesaid letters patent and reissued letters patent, and granted, extended, and continued to your orator, Hosea Ball, his heirs, executors, administrators and assigns, for the term of seven years from September twenty-third, 1870, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used the said improvements therein specified, which improvements are fully set forth in the schedules aforesaid; that said renewal and extension of said letters patent are fully set forth in a certificate of extension
8 issued to your orator, Hosea Ball, as aforesaid, by the Commissioner of Patents, on said twenty-third September, 1870, as by reference to said certificate (which, or a certified copy of which, your orator is ready to produce in court) will more fully and at large appear.

And your orator and oratrix further show that your oratrix is in the full enjoyment of the rights and interests acquired by her as aforesaid, and that said exclusive rights and interests have been and are of great value to your oratrix.

And your orator and oratrix further show that under the said letters patent to your oratrix, assigned and conveyed as aforesaid, and in the exercise and enjoyment of her exclusive rights and privileges thereunder, she has since the date of said assignment to her erected two ovens for baking purposes in said New Orleans, upon the plan of and under the said letters patent, and has ever since, and for more than two years, had them in constant, very profitable and undisturbed public use.

And your orator and oratrix further show that machines similar in construction, use, and purpose have been in constant, profitable
9 and undisturbed public use in various other parts of the United States for many years, constructed according to the invention covered by the said letters patent, and licensed or constructed by your orator, said Ball, patentee as aforesaid, or under his direction, and in the exercise of his exclusive privileges as such patentee.

And your orator and oratrix further show unto your honors, that the said defendants, James Hall and the said N. A. Baumgarden and Justin Langles, composing the said copartnership of Baumgarden & Langles, have now within the said city of New Orleans, in the State of Louisiana, and within the territory above described as the territory included in the said grant from your orator Ball to your oratrix Margaret Haughery, as hereinbefore set forth, erected and constructed a bake oven substantially the same in construction and mode of operation as the oven in the said letters patent mentioned, the exclusive right to make, use and vend which is by law vested in your oratrix, Margaret Haughery, at and within the territory to her so transferred and granted as aforesaid; that said defendants have so constructed said bake-oven
10 as aforesaid, and threaten and intend to use and operate the same at New Orleans aforesaid, without any license, permission or authority from your said oratrix, whereby the said defendants did and still do infringe upon the exclusive privileges intended to be secured to your said orator and by him granted to your said oratrix as aforesaid.

And your orator and oratrix further show that they have exhausted all amicable means in their efforts to cause the said defendants to desist in their said wrongful infringement of the rights so secured by said letters patent without avail, and that although in all things aware of the rights of said complainants, they still continue to disregard the same, and unless restrained by the proper order and decree of this hon-

orable court, will to the utmost of their ability continue to injure and defraud your oratrix by continued acts of infringement as above set forth and complained of.

All of which actings, doings and purposes are contrary to equity and good conscience, and tend to the manifest wrong and injury of your orator and oratrix in the premises.

In consideration whereof, and forasmuch as your orator and
11 oratrix can only have adequate relief in the premises in this honorable court, where matters of this nature are properly cognizable and relievable, may it please your honors, your orator and oratrix pray that the said defendants may answer the premises and that they may be decreed to account with and pay over to your oratrix the profits which they have made by such unlawful manufacture, use and sales, and all such gains and profits as your oratrix would have received but for the said unlawful acts and doings of the said defendants.

And may it please your honors, the premises considered, to grant unto your orator and oratrix the writ of injunction issuing out of and under the seal of this honorable court, or issued by one of your honors according to the form of the statute in such case made and provided, perpetually enjoining and restraining the said defendants and each of them, and the clerks, attorneys, agents, servants, and workmen of them and of each of them, from directly or indirectly making, using, or selling to

others, any oven for baking purposes such as hereinbefore de-
12 scribed, and described and claimed in said letters patent, and the schedules, specifications, claims and drawings making part thereof, and any oven for baking purposes substantially the same in construction and mode of operation as the oven in said letters patent mentioned; and that your orator and oratrix may have such other or further relief in the premises as the nature of the circumstances of this case may require, and to this honorable court shall seem meet.

And may it please your honors to grant to your orator and oratrix a provisional or preliminary injunction issued out of and under the seal of this honorable court, enjoining and restraining the defendants and each of them, and the clerks, attorneys, agents, servants and workmen of them and of each of them, to the same tenor, purport and effect hereinbefore prayed for in regard to said perpetual injunction.

And may it please your honors to grant unto your orator and oratrix a writ of subpœna of the United States of America, issuing out of and under the seal of this honorable court, directed to the said James Hall,

N. A. Baumgarden and Justin Langles, defendants, commanding
13 them, on a day certain, therein to be named, and under a certain penalty, to be and appear in this honorable court, then and there to answer all and singular the premises, and to stand to, perform and abide such further order, direction and decree as may be made against them or any of them.

(Signed) CHARLES S. RICE,
do WM. R. WHITAKER,
Solicitors of Complainants.
(Signed) J. R. BECKWITH,
Counsel.

Subpœna to N. A. Baumgarden—Issued 19 *October*, 1872.

UNITED STATES OF AMERICA:

The President of the United States, to the marshal for the district of Louisiana, greeting:

You are hereby commanded to summon N. A. Baumgarden individ-

ually and as a member of the firm of Baumgarden & Langles, and a citizen of the State of Louisiana, to appear before the honorable the judges of the fifth judicial circuit of the United States of America, at a circuit court to be holden on the first Monday of December, 1872, then
14 and there to answer a bill in chancery filed against him and others, wherein Hosea Ball, of the city, county, and State of New York, and Mrs. Margaret Haughery, widow, residing in New Orleans, Louisiana, are complainants, and said N. A. Baumgarden and others are defendants.

Herein fail not, and have you then and there this writ, with your endorsement thereon how you have executed the same.

Witness the honorable Salmon P. Chase, Chief Justice of the Supreme Court of the United States of America, this 19th day of October, in the year of our Lord one thousand eight hundred and seventy-two and the 97th year of American Independence.

[SEAL.] (Signed) F. A. WOOLFLEY, *Clerk.*

The defendant is hereby notified that he is required to enter his appearance in the clerk's office of the United States circuit court, on or before the first Monday of December, 1872, otherwise the bill may be taken pro confesso.

(Signed) F. A. WOOLFLEY, *Clerk.*

Marshal's return.

15 Received, Oct. 19, 1872, by the U. S. marshal, and on the 26th day of the same month and year served the copy hereof on N. A. Baumgarden by handing it to Justin Langles, a partner of the firm of Baumgarden and Langles, at his office on Delord st., between Peter and Front streets, in the city of New Orleans.

(Signed) CHARLES J. FOGERTY,
D'y Marsha'.

Citation to Justin Langles.—Issued October 19th, 1872.

UNITED STATES OF AMERICA:

The President of the United States, to the marshal for the district of Louisiana, greeting:

You are hereby commanded to summon Justin Langles individually and as a member of the firm of Baumgarden & Langles, & a citizen of the State of Louisiana, to appear before the honorable the judges of the fifth judicial circuit of the United States of America, at a circuit court to be holden on the first Monday of December, 1872, then and there to answer a bill in chancery, filed against him and others, wherein
16 Hosea Ball, of the city, county and State of New York, and Mrs. Margaret Haughery, widow, residing in New Orleans, Louisiana, are complainants, and said Justin Langles and others are defendants.

Herein fail not, and have you then and there this writ, with your endorsement thereon how you have executed the same.

Witness the honorable Salmon P. Chase, Chief Justice of the Supreme Court of the United States of America, this 19th day of October, in the year of our Lord one thousand eight hundred and seventy-two, and the 97th year of American Independence.

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(Signed) F. A. WOOLFLEY, *Clerk.*

Marshal's return.

Received, Oct. 19, 1872, by the U. S. marshal, and on the 26th
17 day of the same month and year served the copy hereof on Justin Langles, at his office, personally, on Delord st., between Peter and Front streets, in the city of New Orleans.

(Signed) CHARLES J. FOGERTY,
Dy Marshal.

Entry at rules. Appearance of defendants.—Extract from chancery order book, December rules, 1872, Monday, 2d.

HOSEA BALL & AL. *vs.* JAMES HALL ET AL. } No. 6811

The defendants, N. A. Baumgarden and Justin Langles, by their solicitor, G. Schmidt, enter their appearance to complainants' bill.

Answer of Baumgarden & Langles.—Filed January 21, 1876.

U. S. circuit court.

HOSEA BALL ET ALS. *vs.* JAMES HALL ET ALS. } No. 6811.

answer

The joint and several answers of N. A. Baumgarden and Justin
18 Langles, two of the defendants, to the bill of complaint of Hosea Ball and Margaret Haughery, complainants.

These defendants now and all times hereafter, saving and reserving unto themselves the benefit of all legal exceptions to the many errors, uncertainties and other imperfections in the said bill of complaint contained, for answer thereto or such parts thereof as these defendants have been advised it is material or necessary for them to answer, they answer and say:

1°. That they have been advised and informed, and admit it to be true, that upon application of complainant letters patent of the United States were granted and issued to the said Hosea Ball on the 23d day of September, 1856, for an alleged invention of a new and useful oven, and these defendants say that they do not know and are not informed, save by said bill of complaint, whether or not said Hosea Ball did properly make application for said patent and did comply with all the requirements of law, and did have said patent issued to him in due form of law, and leave the complainant to make such proof thereof as he shall be advised is material.

19 2°. And these defendants, further answering, say, that they do not know, and are not informed save by the said bill of complaint, whether or not Hosea Ball sold, conveyed, or assigned his right, title, and interest in the said patent and alleged invention secured by said

letters patent or any interest therein to the said Margaret Haughery, and whether or not such assignment was recorded in the Patent Office, and they leave the complainants to make such proof thereof as they shall be advised.

3°. And these defendants, further answering, say, that they do not know and are not informed, save by the bill of complaint, that the said Hosea Ball did, on the 12th day of October, 1869, renew and reissue the aforesaid letters patent covering and including certain new and useful improvements in ovens, as by him alleged, and they leave the complainant to make such proof thereof as he shall be advised is material as well as of the assignment of said new and useful improvement to Margaret Haughery and the proper recording of the same.

4°. These defendants, further answering, say, that they do not
20 know, and are not informed save by the bill of complaint, whether or not the said Hosea Ball did, on the 19th day of September, 1870, renew and extend the said letters patent for the term of seven years from the 23d September, 1870, as by him alleged, and did properly make application for said extension and complied with all the requirements of law, and they leave the complainant to make such proof thereof as he shall be advised is material.

5°. And these defendants, on information and belief, deny that by virtue of any such patent and assignment as mentioned in the bill of complaint, said complainant became or ever were possessed of or vested of any exclusive right to use, make, or sell, in the United States or elsewhere, the alleged invention patented by the said letters patent.

6°. And these defendants, further answering, say, that they are informed believe it to be true that the description of the alleged invention as set forth in the specification annexed to said letters patent is incomplete and ambiguous, and the said specification does not show the method of making and using the said alleged patented inven-
21 tion in such full, clear, and exact terms as to enable any person skilled in the art or science to which it appertains to make and use the same.

7°. And these defendants, further answering, say, that they are informed and believe it to be true that the said invention and discovery and the same principle and combination patented in and by the letters patent mentioned in the aforesaid bill of complaint were patented on the 13th day of June, 1846, by Louis Joseph Covlet, then residing in Paris, No. 9 Rue des Magasins, and now residing in said city, No. 35 Rue Fessard, in the Republic of France, the said patent having been granted the said Covlet by the Government of France existing at the aforesaid 13th of June, 1846.

8°. And these defendants, further answering, say, that they are informed and believe it to be true that the said invention and discovery and the same principle of combination and substantial and material parts thereof, patented in and by the letters patent mentioned in the bill of complaint aforesaid, were mentioned and described in cer-
22 tain printed publications, that is to say, in the Bulletin de lois de France of the years 1846, 1847, & 1848, published in Paris, in the aforesaid years, by order of the French Government, and in conformity with the laws of the country then in force: also, in a work published by direction of the minister of agriculture & commerce of France, entitled Catalogue des Brevets d'Invention (Catalogue of Patents), published in Paris in the years 1846, 1847, & 1848; also in another work published by order of the aforesaid minister of agriculture & commerce in Paris, France, during the aforesaid years 1846, 1847, and 1848, and

entitled Description des Machines et Procédés pour lesquels les Brevets d'Invention ont été pris sous le regime de la loi de 1844, publiée par ordre du ministre, etc." (description of the machines and inventions for which patents have been obtained in conformity to the law of 1844, published by order of the minister, etc.)—more particular reference to the pages where said descriptions are found will be furnished as soon as the works themselves can be obtained; all of which aforesaid publications were published as aforesaid by the French Government
23 or its officers in Paris, France, and publicly circulated and distributed prior to the supposed invention and discovery of the said Hosea Ball, more particular and exact description of which will be furnished when the aforesaid works which have been ordered from Paris come to hand.

9°. And these defendants, further answering, say; that they are informed and verily believe that the said invention and discovery and substantial and material parts thereof patented as mentioned in the aforesaid bill of complaint, had been patented, invented, and discovered previously by one Louis Joseph Covlet, who resides at No. 35 rue Fessard, Paris, France, and obtained a patent therefor as early as the 13th day of June, 1846, as the whole will more fully appear by a duly authenticated copy of the said letters-patent, together with three additions thereto obtained from the French Government in conformity to the patent law of France of 1844, on the 7th and 12th June, 1847, and the 19th October, 1848, which will be produced as soon as they can be procured and forwarded from Paris, France, where they have been ordered.

24 10°. And these defendants further say, that the new and useful oven which the patentee claims as having been infringed by these defendants is very different in kind from that used by these defendants, who do not use, employ, or have ever used or employed the oven patented by the said Hosea Ball.

11°. And these defendants, further answering, deny that they have ever used the invention claimed by complainants, or injured or wronged them, or deprived them of any benefit or profit or advantage whatever, or that they are now using or have ever used the oven patented by complainant, or in any way infringed his aforesaid patent.

12°. And the said defendants, further answering, deny that the said complainants are entitled to the relief or any part thereof in the said complaint demanded; and these defendants submit to this honorable court that all and every the matters in the said complainants' bill mentioned and complained of are matters which may be tried and determined at law, and with respect to which the said complainant is not entitled to any relief from a court of equity, and these defend-
25 ants hope they shall have the same benefit of this defence as if they had demurred to the said complainants' bill; and these defendants further pray that the defence contained in the first paragraph of this answer be taken to confer on them the same advantage as if he had pleaded or demurred to plaintiff's bill of complaint on the ground that the facts and allegations therein contained do not entitle him to the relief asked, and they further pray leave to be dismissed with a reasonable cost & charges in this behalf most wrongfully sustained.

(Signed) JUSTIN LANGLES.
(Signed) G. SCHMIDT,
Solicitor & of Counsel for Def'ts.

UNITED STATES OF AMERICA,
District of Louisiana, to wit:

Justin Langles, being duly sworn, does depose and say that he is one of the defendants named in the foregoing answer subscribed by him and managing superintendent of the machinery used in the bakery of his firm of Baumgarden & Langles; that he has read the foregoing
26 answer and knows the contents thereof, and that the same is true of his own knowledge except as to the matters therein stated on information and belief, and as to those matters he verily believes it to be true.

(Signed) JUSTIN LANGLES.

Sworn to & subscribed before me this 21 January, 1873.

(Signed) F. B. VINOT,
U. S. Comm'r.

Notice of filing joint and several answer of Baumgarden & Langles.—Extract from chancery order book.

JANUARY 21, 1873.

HOSEA BALL ET ALS. }
vs. } No. 6811.
JAMES HALL ET ALS. }

The defendants, N. A. Baumgarden and Justin Langles, have this day filed their joint and several answer to the complainant' bill of complaint.

Motion and order.—Complainants not required to consider answer until production of certain publications, &c.—Entered and filed April 3d, 1873.

27 U. S. circuit court. In equity.

HOSEA BALL ET AL. }
vs. } No. 6811.
JAMES HALL ET AL. }

And now come the said complainants and suggest unto the court that in the answer of the defendants herein among other matters alleged in defense to said complainants' bill is an allegation of want of novelty and invention in the patented device described in said bill, with a general reference to a foreign publication in France, with the statement that the same will be produced as a part of said answer, and suggesting that the same has not been produced, and that complainants have no means of ascertaining the nature or character of said alleged publication except by its production: It is ordered that the complainants shall not be required to take issue on said answer or file any replication thereto until the said defendants shall produce and file said alleged publication, and that until the same is produced and filed the complainants
28 shall not be required to consider said answer.

Replication.—Filed May 5th, 1873.

Circuit court of the United States, district of Louisiana. In equity. No. 6811.

The joint replication of Hosea Ball and Margaret Haughery, complainants, to the joint and several answer of N. A. Baumgarden and Justin Langles.

These repliants, saving and reserving unto themselves all and all man-

ner of advantage of exception to the manifest insufficiencies of the said answer, for replication thereunto say that they will prove their said bill to be true, certain, and sufficient in law to be answered unto, and that the said answer of said defendants is uncertain, untrue, and insufficient to be replied unto by these repliants; without this that any other matter or thing whatsoever in the said answer contained material in law to be replied unto, confessed, avoided, traversed, or denied, is true.

29 All which matters and things these repliants are and will be ready to prove as this hon. court shall direct, and humbly pray as in and by their said bill they have already prayed.

(Signed) J. R. BECKWITH,
Do WHITAKER & RICE,
Solicitors for Complainants.

Entry at rules.—Notice of filing of replication. May rules, 1873.

HOSEA BALL ET AL. }
vs. } No. 6811.
JAMES HALL ET AL. }

The complainants herein by their solicitor, J. R. Beckwith, have this day filed their replication to the defendants' answer.

Rule for injunction.—Entered and filed May 5th, 1873.

United States circuit court, district of Louisiana. In equity.

HOSEA BALL ET AL. }
vs. } No. 6811.
JAMES HALL ET AL. }

30 On suggesting to the court that since the exhibition and filing of complainants' bill herein the validity of the patent set forth in complainants' bill of complaint has been adjudicated and established by two several decrees of the circuit court of the United States for the southern district of New York, and that the use of a mechanical contrivance and combination in all respects substantially the same as used by the defendants and complained of in the said bill has been perpetually enjoined although sought to be justified by substantially the same defences set forth in the defendants' answer herein, and further that the defendants are still interfering with the rights of said complainants by the continued violation of their rights as secured by said letters patent, as will appear by the documents and affidavit to be filed and produced by said complainant, it is ordered that the defendants shew cause on Saturday the 10 instant, at 11 a. m., why a writ of injunction pendente lite should not be allowed against them as prayed for in said com-

31 plainants' bill of complaint.

Marshal's return.

Received May 6, '73, by the U. S. marshal, and on the 7th day of the same month and year served a copy of within rule on G. Schmidt, named herein, by handing the same to him in person.

New Orleans, May 7th, 1873.

(Signed) S. W. REED,
Dy U. S. Marshal.

MAY 10, '73.

Rule for leave to file supplemental answer.—Entered and filed May 21, 1873.

U. S. circuit court.

HOSEA BALL ET ALS. vs. JAMES HALL ET ALS. } No. 6811.

On motion of G. Schmidt & E. C. Billings, solicitors for defendants, and upon presentation of the supplemental answer herein, embodying defences which were unknown to the defendants or their solicitors at the time of filing the original answer herein, it is ordered that
32 the complainants show cause on the 24th day of May, A. D. 1875, why the said defendants should not have leave to file said answer as supplemental to said original answer.

Marshal's return.

Received May 22, '73, by the U. S. marshal, and on same day, month, and year served a copy of within rule on J. R. Beckwith, named herein, by handing the same to him in person.

New Orleans, May 23d, 1873.

(Signed) S. W. REED,
Dy U. S. Marshal.

Order defendants allowed to file supplemental answer, &c.—Extract from minutes of 13 June, 1873, April term, 1873.

NEW ORLEANS, *Friday, June 13th*, 1873.

Court met pursuant to adjournment.

Present, Hon. E. H. Durell, district judge.

HOSEA BALL & AL. vs. JAMES HALL ET AL. } No. 6811.

The rule for injunction was called up—J. R. Beckwith for plaint-
33 iffs in rule, E. C. Billings & G. Schmidt for defendants in rule—when, after hearing the pleadings and the evidence, the same is continued till to-morrow at 11 a. m.; and, by consent of counsel, the rule of 21 May, 1873, is made absolute, and the supplemental answer presented at that date is allowed to be filed.

Minute of evidence.—Filed June 13th, 1873.

HOSEA BALL ET AL. vs. JAMES HALL ET AL. } 6811.

Plaintiffs in rule for injunction offered articles of agreement marked 1 & 2; No. 3, affidavit of Sam'l Brock; No. 4, letters patent; No. 5, letters patent; No. 6, certificate Comm'r of Patents; No. 7, plan; No. 8, plan; No. 9, patent; No. 10, bill in equity; No. 11, bill in equity; No. 12, depositions; No. 13, affidavits of Bernard Klotz and Wm. R. Whitaker.

Defendan's in rule offered affidavit of Justin Langles, marked
34 No. 14; affidavit of Wm. Clough, No. 15; Joseph Covlet's brevet, No. 16; first addition to same, marked No. 17; and document No. 18.

DOCUMENT No. 1.

[Three 5-cent int. rev. stamps cancelled.]

STATE OF LOUISIANA,
Parish of Orleans, city of New Orleans:

Articles of agreement made and entered into this 13th day of June, A. D. 1870, between Hosea Ball, of the State of New York, and city of New York, on the first part, and Mrs. Margaret Haughery, of the State of Louisiana, parish of Orleans and city of New Orleans, on the second part, witnessed:

That for and in consideration of the sum of seventeen hundred and fifty dollars to me paid in hand, the receipt of which is hereby acknowledged, and for a further sum of seventeen hundred and fifty dollars to be paid as hereinafter specified, that the said Hosea Ball being the legal owner of certain letters patent, issued by the United States of America, for an improvement in ovens, on the 23d day of September, A.
35 D. 1856, and which said letters patent were surrendered by him, and were reissued on the 12th day of October, A. D. 1869, with amended specifications and claims and were numbered 3666, has this day sold, granted, conveyed, and assigned unto the said Mrs. Margaret Haughery, her heirs, executors, administrators, or assigns, all his right, title, and interests in said letters patent as before described in and for a certain territory composed of the State of Texas, as it is now bounded and known, and for a certain other territory composed of the town of Shreveport, in the State of Louisiana, and a radius or a circle of fifty miles in and around and about the said town of Shreveport; the said town of Shreveport being the centre of said circle.

To have and to hold all rights, exclusive use and privileges under said letters patent which the said Ball now has and to all reissues, extensions, and renewals now had or hereinafter to be had or obtained from the United States of America.

36 And the said Hosea Ball, for himself, his heirs, executors, administrators, or assigns, binds himself and them to use all diligence and legal and proper means to obtain from the said United States an extension or renewal of said letters patent, and to transfer to said Margaret Haughery, her heirs, executors, administrators, or assigns, all the right, title, and interest to the said Ball may become possessed of by such renewal or extension to the territory aforementioned, and when so transferred, the said Mrs. Margaret Haughery binds herself, her heirs, executors, administrators, or assigns, to pay or cause to be paid to the said Hosea Ball the sum of seventeen hundred and fifty dollars as before specified; but if the said Ball should fail to obtain from the United States of America a renewal or extension of the aforesaid letters patent, then and in that case the said sum of seventeen hundred and fifty dollars, it is understood and agreed, shall not be demanded of or paid by the said Mrs. Margaret Haughery, nor shall she be in any way held liable for the same.

(Signed) HOSEA BALL.
" MARGARET HAUGHERY,
pr. pro N. BURKE.

37 Witness:
(Signed) H. WINSLOW,
do. BERNARD KLOTZ.

U. S. PATENT OFFICE.

Received for record June 18, 1870, and recorded in Liber Q., 12, page 382 of transfers of patents.

In testimony whereof I have caused the seal of the Patent Office to be hereunto affixed.

[SEAL] (Signed) J. H. HODGES,
Act'g Com'r of Patents.

(On the margin:) Ex'd. A. J. P.

Fee $2; paid.

(Endorsed:) U. S. circuit court. No. 6811. Offered by pl'ffs June 13th, 73. (Signed) F. B. Vinot, d'y clerk.

DOCUMENT No. 2.

[Three 5-cent int.-rev. stamps, cancelled.]

Articles of agreement made out and entered into this 25th day of March, A. D. 1869, between Hosea Hall, of the city and State of New York, on the first part, and Mrs. Margaret Haughery of the city of New Orleans, and State of Louisiana, on the second part, witnesseth:

38 That the said Hosea Ball, who is the legal and sole owner of certain letters patent issued by the United States for an improvement on ovens, which said letters patent were issued to said Hosea Ball on the 23d day of September, A. D. 1856, for the term of fourteen years, and being numbered fifteen thousand seven hundred and fifty-three, does hereby, for and in consideration of certain conditions hereinafter named, gives, grants, and sells unto Mrs. Margaret Haughery, of the city and State aforesaid, her heirs, executors, administrators, and assigns, and does hereby give, grant, sell, and convey unto the said Mrs. Margaret Haughery as aforesaid, all his right, title, interest, and privileges in and to the said letters patent for the aforesaid improvement upon ovens, numbered and dated as before mentioned, which he, the said Hosea Ball, now holds or may hereafter become possessed of, by virtue of a reissue of said letters patent or for an extension thereof, in and for the city of New Orleans, State of Louisiana, and for an area of fifty miles around and adjoining the said city of New Orleans, for and

39 in consideration of the sum of three thousand dollars, to be paid by the said Margaret Haughery as hereinafter set forth and agreed upon.

And the said Hosea Ball further agrees and binds himself, his heirs, administrators, and assigns, to these further conditions and agreements, to wit: That the said Hosea Ball will furnish, erect, and deliver unto the said Margaret Haughery, upon her premises in the aforesaid city of New Orleans, Nos. 74, 76, & 78 New Levee street, one oven constructed according to the plans & specifications as set forth in his said letters patent No. 15753, adding thereto such improvements as his experience may deem beneficial should it be so desired, furnishing all the material, laborer, iron work, machinery, *ect.*, at his own cost and expense, and to deliver the same within a reasonable time in full and perfect working condition, the whole to be constructed in a workmanlike manner; and the said Ball hereby guarantees the said oven when constructed to bake well and perfectly forty barrels of flour in ten hours into ship biscuit, or eighty barrels of flour into ship biscuit in twenty-four hours.

For and in consideration of the construction of the said oven to

40 be made and turned over to the afore'd Margaret Haughery, completed and performing according to the aforesaid manner as set

forth above, she hereby agrees for herself, her heirs, administrators, or assigns, to pay or cause to be paid unto the said Ball the sum of five thousand five hundred dollars as hereinafter specified.

Two thousand five hundred dollars to be paid to the said Ball in the city of New York upon the completion and shipment of the machinery and iron-work necessary to construct said oven from such point as he may see proper or convenient to have the same made, and six thousand dollars to be paid when said oven is completed and performs as guaranteed aforesaid, making a total of eighty-five hundred dollars.

And the aforesaid Ball furthermore binds himself, his heirs, executors, administrators, and assigns, to use all proper means and diligence to procure a reissue or extension of said letters patent prior to its expiration, and when so obtained to convey to the aforesaid Mrs. Margaret Haughery all such rights and privileges as he may obtain by the
41 reissue, renewal, or extension of the aforesaid letters patent to the aforesaid parts of country as were herein before specified and laid down, to wit, the city of New Orleans, State of Louisiana, and an area of fifty around and adjoining said city of New Orleans.

(Signed) HOSEA BALL. [L. .S]
do. MARGARET HAUGHERY. [L. S]
By her agent, H. WINSLOW.

Witness:
(Signed) THOS. CHALMERS, JR.

STATE OF NEW YORK,
City & County of New York, ss:

On this 22d day of March, A. D. 1869, personally appeared before me Hosea Ball and H. Winslow, to me personally known to be the same persons described in and who executed the foregoing instrument, and they severally acknowledged to me that they executed the same.

[SEAL.] (Signed) ORSON A. HOUSE,
Notary Public, N. Y. Co.

U. S. PATENT OFFICE.

Received March 23d, 1869, and recorded in Liber J 11, page 345 of transfers of patents.

In testimony whereof I have caused the seal of the Patent Office to be hereunto affixed.

[SEAL.] (Signed) ELISHA GROTE,
Com'r of Patents.

(On the margin:) H. N. S.

42 Rec'd New Orleans, La., July 26, 1869, from Mrs. Margaret Haughery, eight thousand five hundred dollars, in full for amount due me on the within contract.

(Signed) HOSEA BALL.
$8,500.00.

[5 c'ts int.-rev. st'p, cancelled.]

(Endorsed:) No. 6811. U. S. circuit court. No. 2. Offered by plaintiffs June 13th, 1873. (Signed) F. B. Vinot, d'y clerk.

Offered in evidence by compl'ts on page 44 of the testimony, and marked Exhibit No. 2 for identification.

New Orleans, Sept. 2d, 1873.

(Signed) D. URBAN,
U. S. Comm'r & Spec'l Examiner.

DOCUMENT No. 3.

Affidavit of Sam'l Brock.

U. S. circuit court, district of Louisiana.

HOSEA BALL ET AL. }
vs. } No. 6811.
JAMES HALL ET AL. }

SAMUEL BROCK, being duly sworn, says:

My name is Samuel Brock. I am fifty years of age. I reside in the city of New Orleans. I am a consulting engineer and solicitor
43 of patents. I have been frequently examined in patent causes in the United States circuit courts, as mechanical expert. I have read and understand the contents of the reissued letters patent granted Hosea Ball, dated June 14th, 1870, No. 4026, for "oven." I have examined the model marked B, and find it to be a correct copy, correctly representing the oven described and shown in the specifications and drawings of the reissued letters patent granted to Hosea Ball.

I have examined the model marked D, which has attached to it a certificate under the seal of the U. S. Patent Office certifying that it is a correct copy of the model of a "bake-oven" for which letters patent were granted and issued to Duncan McKenzie, under date of June 6th, 1871, No. 115626.

I have also examined the model marked C, which has a certificate attached to it signed by the Acting Commissioner of Patents and under the seal of the Patent Office, certifying that it was a correct copy
44 of the model filed in the application for a patent by James Hall for bake-oven, which said letters patent were granted and issued to him under date of October 11, 1870, No. 108258.

The claims of Ball is—

1st. "One or more swinging bread-holders, suspended from the arms or end plates of a rotating reel, in combination with a furnace so arranged and connected that the products of combination will pass into or through the chamber within which the bread-holders move."

2d. "In combination with a rotating reel and swinging bread-holders, a flue on one or more sides of the chamber in which the reel rotates, communicating with said chamber through apertures in the wall between them."

3rd. "In combination with a swinging bread-holder, revolving in an oven, a discharging-chute and tripping device, by which the bread is delivered from its platform and into the chute, substantially as and for the purposes described."

And he further saith that the first claim made by Ball com-
45 prises the following three elements:

1st. A revolving reel carrying one or more swinging bread-holders.

2nd. A furnace for the combustion of fuel.

3rd. That the products of combustion will pass into or through the chamber within which the bread-holders move.

This is all plainly shown in the McKenzie and Hall patents; they embrace the first, second, and third elements of Ball's first claim. For it must be understood that the invention is for "an improvement in ovens," and the object to be obtained is the baking of bread. The revolving reel and the heat of combustion are but accessories to the production of

vention, and that the same hath not to his knowledge and belief been previously known or used; has paid into the Treasury of the United States the sum of thirty dollars, and presented a petition to the Commissioner of Patents praying that a patent may be issued therefor:

These are therefore to grant to the said Hosea Ball, his executors, administrators, or assigns, for the term of fourteen years from the twenty-third day of September, one thousand eight hundred and fifty-six, the full and exclusive right and liberty of making, using, and vending to others to be used the said invention, a description whereof is given in the annexed schedule and made a part of these presents.

In testimony whereof I have caused these letters to be made patent, and the seal of the Patent Office to be hereunto affixed.

Given under my hand at the city of Washington this twelfth
53 day of October, in the year of our Lord one thousand eight hundred and sixty-nine, and of the Independence of the United States of America the ninety-fourth.

[L. S.] (Signed) W. T. OTTO,
Acting Secretary of the Interior.

" S. H. HODGES,
Acting Commissioner of Patents.

Countersigned and sealed with the seal of the Patent Office.

UNITED STATES PATENT OFFICE.

Hosea Ball, of New York, N. Y. Letters patents No. 15753, dated September 23, 1856; reissue No. 3666, dated October 12, 1869. Oven.

The schedule referred to in these letters patent and making part of the same.

To all whom it may concern:

Be it known that I, Hosea Ball, of the city, county, and State of New York, have invented a new and useful improvement in ovens, of which the following is a description:

Nature and objects of the invention.

My oven is constructed with a series of bread-receiving tables or shelves, suspended from a reel, revolving within a chamber into or through which the direct heat from the furnace is passed and properly distributed.

54 *Description with reference to the drawings.*

The accompanying drawings are sectional views, illustrating my invention.

Figure 1 is a vertical transverse section.

Figure 2 is a vertical section in a plane coincident with axis of the reel.

Like letters of reference indicate corresponding parts in both views.

A represents the fuel receptacle of furnace;

B, the ash-pit; and

C, the combustion-chamber, which communicates directly or indirectly in any proper manner with the chamber in which the bread-receiving shelves or platforms *h* are revolved.

D represents the shaft, and *f* the ends or arms of a reel, by which the shelves *h* are suspended and revolved.

The flues *c d*, and openings *a*, *e*, *e'*, to permit the passage or circulation of gases into or through the bread-chamber, may be located and arranged in any effective manner, and any suitable system of dampers may be employed to regulate the course or strength of the draught. In front of the oven is an opening, H, employed for the introduction of the bread, and close by a door, I.

A chute, G, may be used for the discharge of bread, and the
55 discharge may be made automatic by guides, *g*, with which the edges of the shelves or platform *h* will come in contact as the reel revolves, so as to incline the said shelves to the same angle as the chute.

The chute is to be closed by a suitable door during the baking operation.

Operation.

The shelves or platforms *h* are each, in succession, brought opposite the opening H, by the rotation of the shaft D, and a supply of bread placed upon them; the doors are then closed, and the baking commenced. The reel may be rotated as required during the baking operation, to apply an equal heat to the bread upon the several shelves or platforms. When the baking is completed the bread may be withdrawn from each platform in succession through the opening H, or, if preferred, it may be discharged either automatically or otherwise through the chute G.

Claims.

I claim as my invention—

1. One or more swinging bread-holders, suspended from the arms or end-plates of a rotating reel, in combination with a furnace, so arranged and connected that the produc s of combustion will pass into or through the chamber within which the bread-holders move.

56 2. In combination with a rotating reel and swinging bread-holders, a flue around the chamber in which the reel rotates, and communicating with said chamber through perforations in the wall between them.

3. In combination with a swinging bread-holder, revolving in an oven, a discharging chute and tripping device, by which the bread is delivered from its platform and into the chute, substantially as and for the purposes described.

To the above specification of my improvement in bake-ovens I have signed my hand this 31st day of August, 1868.

HOSEA BALL.

Witnesses:
EDWARD H. KNIGHT.
WM. H. BRERETON.

(Endorsed:) U. S. cir. c't. 6811. No. 4. Offered by plaintiffs June 13, '73. F. B. Vinot, d'y clerk.

Offered in evidence by compl'ts on page 42 of the testimony, and marked Exhibit No. 4, for identification.
New Orleans, Sept'r 26, 1873.

D. URBAN,
U. S. Com'r & Special Examiner.

(Here follows diagram marked page 57.)

The U. S. Patent Office to all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office of the reissue letters patent and certificate of extension granted Hosea Ball, dated June 14th, 1870, No. 4026, for "oven."

In testimony whereof I, J. M. Thacher, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this twenty-second day of October, in the year of our Lord one thousand eight hundred and seventy-two, and of the Independence of the United States the ninety-seventh.

[SEAL PATENT OFFICE.] (Signed) J. M. THACHER,
Acting Commissioner.

Certificate of extension.

Whereas upon the petition of Hosea Ball, of New York, New York, for the extension of the patent granted to him September 23, 1856, reissued October 12, 1869, and again reissued June 14, 1870, for an "oven," the undersigned, in accordance with the act of Congress approved
59 the 8th day of July, 1870, entitled "An act to revise, consolidate, and amend the statutes relating to patents and copyrights did, on the 14th day of September, 1870, decide that said patent ought to be extended.

Now, therefore, I, Samuel S. Fisher, Commissioner of Patents, by virtue of the power vested in me by said act of Congress, do renew and extend the said patent, and certify that the same is hereby extended for the term of seven years from and after the expiration of the first term, viz, from the 23d day of September, 1870, which certificate being duly entered of record in the Patent Office, the said patent has now the same effect in law as though the same had been originally granted for the term of twenty-one years.

In testimony whereof I have caused the seal of the Patent Office to be hereunto affixed this 14th day of September, 1870, and of the Independence of the United States the ninety-fifth.

[L. S.] (Signed) SAM'L S. FISHER.

Patent in suit

No. 4026. Reissue.

THE UNITED STATES OF AMERICA:

To all to whom these letters patent shall come:

60 Whereas Hosea Ball, of New York, New York, has alleged that he has invented a new and useful oven (for which letters patent were issued to him, dated September 23, 1856, the same surrendered and new letters issued to him, dated October 12, 1869, which last letters having been surrendered the same have been cancelled and new letters ordered to issue to him on an amended specification), and has made oath that he is a citizen of the United States; that he verily believes he is the original and first inventor or discoverer of the said invention, and that the same hath not to his knowledge and belief been previously known or used; has paid into the Treasury of the United States the sum of thirty dollars, and presented a petition to the Commissioner of Patents praying that a patent may be issued therefor:

These are therefore to grant to the said Hosea Ball, his executors, administrators, or assigns for the term of fourteen years from the twenty-third of September, one thousand eight hundred and fifty-six, the full and exclusive right and liberty of making, using, and vending to others to be used, the said invention, a description whereof is given in the annexed schedule and made a part of these presents.

61 In testimony whereof I have caused these letters to be made patent, and the seal of the Patent Office to be hereunto affixed.

Given under my hand, at the city of Washington, this fourteenth day of June, in the year of our Lord one thousand eight hundred and seventy, and of the Independence of the United States of America the ninety-fourth.

[L. S.] (Signed) W. F. OTTO,
Acting Secretary of the Interior.
SAM'L S. FISHER,
Commissioner of Patents.

Countersigned and sealed with the seal of the Patent Office.

UNITED STATES PATENT OFFICE.

Hosea Ball, of New York, N. Y. Letters Patent, No. 15753, dated September, 1856; reissue, No. 3666, dated October 12, 1869; reissue, No. 4026, dated June 14, 1870. Oven.

The schedule referred to in these letters patent and making part of the same.

Be it known that I, Hosea Ball, of the city, county, and State of New York, have invented a new and useful improvement in ovens, of which the following is a description:

Nature and objects of invention.

My oven is constructed with a series of bread-receiving tables
62 or shelves suspended from a reel revolving within a chamber, into or through which the direct heat from the furnace is passed and properly distributed.

Description with reference to the drawing.

The accompanying drawing is a sectional view illustrating my invention.

Figure 1 is a vertical transverse section.

Figure 2 is a vertical section in a plane coincident with the axis of the reel.

Like letters of reference indicate corresponding parts in both views.

A represents the fuel-receptacle of furnace.

B the ash-pit; and

C the combustion chamber, which communicates directly or indirectly in any proper manner with the chamber in which the bread-receiving shelves or platforms *h* are revolved.

D represents the shaft, and *f* the ends or arms of a reel, by which the shelves *h* are suspended and revolved.

The flues *c d*, and openings *a e e'*, to permit the passage or circulation of gases into or through the bread chamber, may be located and ar-

ranged in any effective manner, and any suitable system of dampers may be employed to regulate the course or strength of the draught.

In front of the oven is an opening, H, employed for the intro-
63 duction of the bread, and closed by a door, I.

A chute, G, may be used for the discharge of bread, and the discharge may be made automatic by guides *g*, with which the edges of the shelves or platforms *h* will come in contact as the reel revolves, so as to incline the said shelves to the same angle as the chute.

The chute is to be closed by a suitable door during the baking operation.

Operation.

The shelves or platforms *h* are each in succession brought opposite the opening H by the rotation of the shaft D, and a supply of bread placed upon them. The doors are then closed and the baking commenced.

The reel may be rotated as required during the baking operation, to apply an equal heat to the bread upon the several shelves or platforms.

When the baking is completed, the bread may be withdrawn from each platform in succession, through the opening H, or, if preferred, it may be discharged, either automatically or otherwise, through the chute G.

Claims.

I claim as my invention:—

1. One or more swinging bread-holders, suspended from the
64 arms or end plates of a rotating reel, in combination with a furnace so arranged and connected that the products of combustion will pass into or through the chamber within which the bread-holders move.

2. In combination with a rotating reel and swinging bread-holders, a flue on one or more sides of the chamber in which the reel rotates, communicating with said chamber through apertures in the wall between them.

3. In combination with a swinging bread-holder, revolving in an oven, a discharging chute and tripping device by which the bread is delivered from its platform and into the chute, substantially as and for the purposes described.

HOSEA BALL.

Witnesses:
EDWARD H. KNIGHT.
JAS. MELDRUM.

(Endorsed:) U. S. cir. c't. 6811. No. 5; offered by plaintiffs June 13, '73. F. B. Vinot, d'y clerk.

Offered in evidence by compl'ts on page 43 of the testimony and marked Exhibit No. 5 for identification.
New Orleans, Sept. 2d, 1873.

D. URBAN,
U. S. Comm'r & Special Examiner.

(Here follows diagram marked page 65.)

66 DOCUMENT NO. 6.

The U. S. Patent Office to all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office.

In testimony whereof I, J. M. Thacher, acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this twenty-first day of October, in the year of our Lord one thousand eight hundred and seventy-two, and of the Independence of the United States the ninety-seventh.

[SEAL.] (Signed) J. M. THACHER,
Acting Commissioner.

In the matter of the application of Hosea Ball for the extension of letters patent for improvement in ovens, granted September 23, 1856.

The original patent has been twice reissued. The improvements claimed in the last reissue are as follows:

"1. One or more swinging bread-holders, suspended from the arms or end plates of a rotating reel, in combination with a furnace so
67 arranged and connected that the products of combustion will pass into or through the chamber within which the bread-holders move.

"2. In combination with a rotating reel and swinging bread-holders, a flue on one or more sides of the chamber in which the reel rotates, communicating with said chamber through apertures in the wall between them.

"3. In combination with a swinging bread-holder, revolving in an oven, a discharging-chute and tripping device, by which the bread is delivered from its platform into the chute, substantially as and for the purposes described."

The application for extension is opposed by Duncan McKenzie, to whom letters patent were granted May 1, 1860, for improvements in baker's oven, in which substantially the same oven was described, except that, instead of introducing the products of combustion into the oven through apertures in the side and rear walls, as in Ball's oven, he uses short inclined flues, extending from the top of the arches of his furnace to a point in the floor of the oven near the side walls.

68 So far as this arrangement is shown in McKenzie's patent, it does not seem materially different in effect from the lower row of apertures in Ball's oven. It is probable, however, that a modification of both, by which the heat should enter directly from the top of the arches by vertical flues, would be preferable to either.

McKenzie bases his opposition upon three points. He asserts, 1, that the invention of Ball lacks patentable novelty; 2, that he has been sufficiently remunerated for all the invention displayed in his oven; and 3, that he has not been diligent, or, as the statute phrases it, that if he has not been sufficiently remunerated, it has not been "without fault or neglect on his part."

The examiner reports that the invention is new and useful. The remonstrant does not, in one sense, deny this. He offers no proof that the precise device or combination shown by Ball existed before his invention. His claim is that, in view of the state of the art, the combinations claimed by Ball, although new, did not require invention.

He shows that "swinging bread-holders suspended from the
69 arms or end plates of a rotating reel" are old, but admits that they were used in furnaces in which the products of combustion did not pass into or through the oven. He also shows that ovens containing mechanical bread-carriers, into and through which products of combustion did pass, were also old, but admits that the bread-carriers were not swinging bread-holders suspended from a rotating reel.

In other words, he shows that both reel and oven are old, separately considered, and he claims that their union did not constitute a patentable combination; that the reel operated in the same manner, whether the products of combustion were introduced or excluded, and that the products of combustion produced the same effect, in the same way, whether they entered a chamber containing a reel or an endless chain.

If these premises are correct, the conclusion urged by remonstrant would inevitably follow. (See Geo. Petry ex parte Comm'r's Decis., Sept., 1870.)

It must be remembered that the invention is an improvement in ovens, and that the single purpose to be attained is the baking of bread.

70 The reel and the heat are but accessories to the production of this result.

The office of the reel is not merely to revolve, as a piece of mechanism, but primarily to carry the dough, and to present it at the right moment and in the best manner, to the action of the heat. The action of the products of combustion, in entering the chamber, is not merely to introduce heat, but so to introduce it that it shall be brought to operate most effectively upon the dough.

Great difficulties were encountered in the pre-existing devices, in which an endless chain was used in combination with an oven into which the products of combustion entered.

If the heat entered below the chain, the plates upon which the dough was placed were apt to be overheated.

If the heat entered above, the tops of the loaves were likely to be burned.

The bread could only advance in a straight line down the middle of a long chamber or flue, which it was extremely difficult to keep at a uniform or regulated temperature.

By the use of the reel, however, the whole oven was reorganized. Instead of a long tube it took the form of a cube, was compact, and easily heated to a uniform temperature.

71 It was more roomy and there was less danger from the impinging unduly upon any given point. The reel, in its revolution, conveyed the bread from the bottom of the chamber to the top and down again, and a much better opportunity was afforded for the circulation of the heat around the dough to be baked.

On the other hand, the very size and operation of the reel rendered it unfitted to successful use in a chamber which was merely enveloped in the products of combustion, but into which they were not admitted. We are not informed as to the success of the two-reel ovens shown in the French patents, but we may fairly infer that they were practically useless, especially from the standpoint of remonstrant, who is inclined to say the same of the oven of Ball, because, although he admits the products of combustion into the oven, he does not admit them directly from the top of the arch.

I am strongly inclined to the opinion, therefore, that there was a mutual action between the two members of Ball's combination, and that their

use in connection did affect and enhance the action of each, so
72 that their joint result was something more than the mere sum of their separate action.

Having found the substantial novelty of this improvement, I have less difficulty with the other questions.

This oven, as Ball constructed it, was an important and valuable step in the art. It does not appear that the people of this country are indebted to another person for the first introduction of these mechanical ovens. As improved by McKenzie, if his improvement be used as described in his patent, which I doubt, it may be more valuable, but even, as it came from the hands of Ball, he is entitled, upon the proofs presented, to greater compensation than he has received. For in the earlier years of his invention he fell into the hands of the Philistines, who captured him and his patent, and in the latter years the title to his invention has been under a cloud, which the remonstrant has done much to create and intensify. He has lost the use of many years of
73 the lifetime of his patent, without neglect on his part. On the contrary, he has been diligent in endeavoring to keep or obtain control of his invention. He had much difficulty to do it, and even when it was done remonstrant denied that he had accomplished it. I think he should be permitted to enjoy a few years under his patent of undoubted, if not peaceable, possession.

The extension is granted.

SAM'L S. FISHER,
Commissioner.

SEPTEMBER 19, 1870.
Ex'd. N. F. S.

(Endorsed:) U. S. circuit court 6811. No. 6. Offered by pl'ffs June 13th, 1874. (Signed) F. B. Vinot, d'y clerk.

Offered in evidence by complt's on page 43 of the testimony and marked Exhibit No. 6, for identification.

New Orleans, September 2d, 1873.

(Signed) D. URBAN,
U. S. Comm'r & Special Examiner.

74 DOCUMENT NO. 7.

UNITED STATES PATENT OFFICE.

Duncan McKenzie, of Brooklyn, New York. Letters patent No. 115,626, dated June 6, 1871. Improvement in ovens.

The schedule referred to in these letters patent, and making part of the same.

To all whom it may concern:

Be it known, that I, Duncan McKenzie, of Brooklyn, in the county of Kings and State of New York, have invented a certain new and useful improvement in ovens, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing forming part of this specification, and in which figures 1 and 2 represent sectional elevations, in planes at right angles to each other, of an oven constructed in accordance with my invention.

Similar letters of reference indicate corresponding parts in both figures.

My invention consists in the combination of an oven for baking bread or other substances, of a revolving carrier for the bread or substance to be baked, in which the shelves that carry said *said* bread or substance are retained in a horizontal position by positive means, so that they cannot tip or swing at any time during the entire revolution of the carrier, and are at the same time disposed at suitable distance from the axis of the carrier and at proper distances apart, whereby greater facility is afforded for putting on and taking off the bread or substance, and less liability of the latter falling off the shelves than when the swinging shelves or holders hitherto employed are used. Said revolving carrier, with its positively-held shelves, is preferably arranged within a furnace or furnaces so constructed that the gaseous products of combustion pass into or through the chamber within which the carrier revolves.

In the accompanying drawing, in which the oven there represented will be described as applied to the baking of bread, A represents the baking chamber or oven, preferably heated by a furnace or furnaces, B B, the gaseous products of combustion from which, after the fires have been fairly lit and the smoke allowed to escape by a direct draught, are passed, by a system of flues, *b b*, in a direct manner through the bottom of the oven and through the chamber in which the bread carrier C is arranged; or said oven may be otherwise heated.

The carrier C consists of two or more parallel disks, frames, or wheels, *c c*, secured at suitable distances apart to a revolving cross shaft, *d*, and which may be made up of radial arms *e e* to form bearings at or near their outer ends for the pivots *f f* of the shelves D D, that occupy a parallel relation to the shaft *d*.

Fast to the pivots *f f*, at one or both ends of the carrier, are links or cranks *h h*, connected by wrist-pins *i i* to a ring plate or frame, *k*, as by arms *l l*, projecting from the latter.

This ring *k* is fitted to travel on or around a fixed circular track, *m*, arranged to occupy an eccentric position relatively with the shaft *d* and frames *c c*, so that upon the rotation of the latter, together with the eccentric ring *k*, through the connecting cranks or links *h h*, the shelves D D are rocked and held in a positive manner to make them preserve a horizontal position throughout the rotation of the carrier, and, in thus not being free to swing or move independently on their pivots, increased facility is afforded for putting on and taking off the bread when either shelf is brought opposite a suitable opening, *n*, in the oven, and the shelves cannot tip to throw off the bread.

Guards *s* may be provided on the rear edges of the shelves to prevent the bread, when putting it in the oven, from being pushed off over the shelves.

What is here claimed, and desired to be secured by letters patent, is—

1. The revolving carrier C, with its one or more shelves or bread-holders D, held by positive means to occupy horizontal positions during the rotation of the carrier, in combination with an oven or baking-chamber, within which said carrier is arranged, substantially as specified.

2. The combination of the shelves or bread-holders D with the revolving end frames *c c*, the crank *h*, the ring *k*, and the eccentric track *m*, essentially as shown and described.

DUNCAN McKENZIE.

Witnesses:
FRED HAYNES.
R. E. RABEAU.

(Endorsed:) U. S. cir. court. 6811. No. 7, offered by pl'ffs June 13, '73. F. B. Vinot, d'y clerk.

Offered in evidence by compl'ts on pages 45 of the testimony, and marked Exhibit No. 7, for identification.

New Orleans, Sept. 2d, 1873.

D. URBAN,
U. S. Comm'r, Special Examiner.

(Here follows diagram marked page 78.)

79 DOCUMENT No. 8.

UNITED STATES PATENT OFFICE.

James Hall, of Cincinnati, Ohio. Letters patent No. 108,258, dated October 11, 1870. Improvement in bake-ovens.

The schedule referred to in these letters patent and making part of the same.

To all whom it may concern:

Be it known that I, James Hall, of Cincinnati, Hamilton County, State of Ohio, have invented a certain new and useful improvement in revolving reel bake-ovens; and I hereby declare the following to be a sufficiently full, clear and exact description thereof to enable one skilled in the art to which my invention appertains to make and use it, reference being had to the accompanying drawing making part of this specification.

Nature and objects of the invention.

My invention relates to the class of bake-ovens which are fitted with revolving reels, carrying swing or gravitating trays, and consists in the provision of an open furnace for the oven, which, in connection with peculiarly-arranged flues, will heat the oven, without permitting the smoke, dirt, or ash dust to rise among the trays, and enables
80 the oven to bake with increased rapidity and economy of fuel, as compared with the furnaces with closed arched tops or covers heretofore used in this class of bake-ovens.

Description of the accompanying drawing.

Figure 1 is a vertical section from front to rear, of a revolving reel bake-oven, embodying my invention.

Figure 2 is a vertical cross-section of the same.

Figure 3 is a sectional plan through line A B, Fig. 1.

General description.

The revolving reel C is journaled in the walls of the oven, as shown, and is provided with the customary swinging trays D.

E is the opening through which the bread to be baked is inserted and withdrawn when baked.

F is the rising flue or chimney.

G is the furnace or fire-chamber; it is entirely open on top, the gases emitted from it being permitted to pass freely around and among the

trays of the reel and escape by way of the side openings *h* of the horizontal flues H H, leading and discharging into the chimney F.

At the back of the furnace G is a pit, I, for the collection of
81 ashes, dirt, and other heavy particles which are carried for a short distance by the current, which rapidly passes through the grate-bars when the fire is stirred up.

At the back of the furnace I provide a horizontal flue, J, which communicates with the chimney F.

This flue being low, and having a powerful "draught," entirely prevents the smoke, ash-dust, &c., from rising among the trays, and carries it into the chimney.

This dust, &c., on its way to the chimney, J, from the fire, may in part fall into the pit I provided for it. This provision of flue, J, prevents anything but light gases from rising into the baking chamber.

Gas-coke is used preferably as fuel for this bake-oven, and it will be seen that, in consequence of the products of combustion being permitted to escape directly into the baking-chamber from the fire, and not confined by an enclosed chamber and flues, this oven can be heated more rapidly and kept at the required temperature at much less expense of fuel than any revolving reel bake-oven heretofore in use.

Claim.

A revolving reel bake-oven, constructed with an open fireplace
82 or furnace, G, back flue J, top flues H H h, and chimney F, constructed and arranged substantially in the manner and for the purposes specified.

In testimony of which invention I hereunto set my hand.

JAMES HALL.

Witnesses:

FRANK MILLWARD.

J. L. WARTMANN.

(Endorsed:) U. S. cir. court. 6811. No. 8. Offered by plaintiffs, June 13, 1873. F. B. Vinot, d'y clerk.

Offered in evidence by compl'ts on page 44 of the testimony, and marked Exhibit No. 8 for identification.

New Orleans, Sept'r 2d, 1873.

D. URBAN,
U. S. Comm'r & Special Examiner.

(Here follows diagram marked page 83.)

84 DOCUMENT No. 9.

The U. States Patent Office to all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office of the letters patent granted Hosea Ball, dated 23d September, 1856, No. 15,753.

In testimony whereof I, Elisha Foote, Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this thirtieth day of March, in the year of our Lord, one thousand eight hundred and sixty-nine, and of the Independence of the United States the ninety-third.

[SEAL PATENT OFFICE.] (Signed) ELISHA FOOTE.

The United States of America to all to whom these letters patent shall come:

Whereas Hosea Ball, of New York, N. Y., has alleged that he has invented a new and useful improvement in ovens, which he states has not been known or used before his application; has made oath that he is a citizen of the United States; that he does verily believe that he is
85 the original and first inventor or discoverer of the said improvement, and that the same hath not, to the best of his knowledge and belief, been previously known or used; has paid into the Treasury of the United States the sum of thirty dollars, and presented a petition to the Commissioner of Patents signifying a desire of obtaining an exclusive property in the said improvement, and praying that a patent may be granted for that purpose:

These are, therefore, to grant, according to law, to the said Hosea Ball, his heirs, administrators, or assigns, for the term of fourteen years from the twenty-third day of September, one thousand eight hundred and fifty-six, the full and exclusive right and liberty of making, constructing, and using, and vending to others to be used, the said improvement, a description whereof is given in the words of the said Ball in the schedule hereunto annexed, and is made part of these presents.

In testimony whereof I have caused these letters to be made patent, and the seal of the Patent Office has been hereunto affixed.

Given under my hand, at the city of Washington, this twenty-
86 third day of September, in the year of our Lord one thousand eight hundred and fifty-six, and of the Independence of the United States of America the eighty-first.

[L. S.] (Signed) GEO. C. WHITING,
Acting Secretary of the Interior.

Countersigned and sealed with the seal of the Patent Office.
(Signed) C. MASON,
Commissioner of Patents.

The schedule referred to in these letters patent and making part of the same.

To all whom it may concern:

Be it known that I, Hosea Ball, of the city, county and State of New York, have invented a new and useful improvement in bake-ovens; and I do hereby declare that the following is a full, clear and exact description of the construction and operation of the same, reference being had to the annexed drawing forming part of this specification, in which—

Figure 1 is a vertical section of the oven taken perpendicular to the axis of reel.

Figure 2 is a vertical section through the axis of reel.

Similar letters of reference in the several figures denote the same part of the oven.

87 The nature of my invention consists in constructing the oven with a series of bread-receivers swung between the ends of a reel, which is hung in an interior perforated chamber, and is capable of rotation on a horizontal shaft; an arrangement being provided for the self-delivery of the bread from the front of the oven, as will be hereinafter set forth.

In the drawing A is the fire-chamber, B is the ash-pit. The space C above the fire-chamber communicates by openings *a* with the vertical side and back flues, *c* and *d*, which communicate with the interior cham-

ber by the openings *e* and *e*'. Across the oven runs the shaft D, to which are secured the plates *f* so as to constitute a reel within the interior chamber. Between the plates *f* are hung a series of platforms *h*, which will remain horizontal in all positions of the reel, the number depending on the diameter of the reel.

In the front of the oven is a chute, G, leading from the interior outward, on the inner extremity of which are guides, *g*, against which the edges of the platforms *h* will come in contact as the reel revolves.

88 Above the chute G is the oponing H for supplying bread to the oven. It is closed by a sliding door, I. The chute will also have a suitable door for closing it during the baking.

The platforms *h* are each in succession brought opposite opening H, by the rotation of shaft D, and a supply of bread placed upon them; all doors are then closed and the baking commenced. Owing to the perforated sides and back of the interior chamber all parts of it receive the full heat of the oven, suitable dampers regulating the course of the products of combustion to the chimney.

When the baking is completed, the reel is revolved, causing the front edge of each platform to come in contact with the guides *g*, and by the depression thus produced causing the platform to assume the angle of the chute and discharge its load thereon, whence it passes to a receiver outside of the oven.

By this construction all parts of the interior chamber are rendered available for baking purposes, the lower part as well as the upper; the construction of the baking-chamber causing all parts to be equally

89 well heated. The swinging platforms moreover favor economy of space in the construction of the oven.

What I claim and desire to secure by letters patent is—

The perforated interior chamber in combination with the rotary reel, and the swinging platforms thereon, self-discharging substantially as set forth.

In testimony whereof I have hereunto signed my name before two subscribing witnesses.

HOSEA BALL.

Witnesses:

GEO. PATTEN.

JOHN S. HOLLINGSHEAD.

(Endorsed:) U. S. cir. court. 6811. No. 9. Offered by pl'ffs June 13, 1873. F. B. Vinot, d'y clerk.

Offered in evidence by complainants on page 42 of the testimony and marked Exhibit No. 9 for identification.

New Orleans, Sept'r 3d, 1873.

D. URBAN,
U. S. Comm'r & Special Examiner.

(Here follows diagram marked page 90.)

91 DOCUMENT NO. 10.

In the circuit court of the United States. In equity.

To the honorable the judges of the circuit court of the United States for the southern district of New York:

Hosea Ball, doing business in the city of New York and a citizen of the State of New York, brings this his bill of complaint against John T.

Wilson, doing business and residing in the city of New York, and citizen of the State of New York.

And thereupon your orator complains and says:

That he is the original and first inventor of new and useful improvements in ovens fully described in the letters patent hereinafter mentioned, and which had not been known or used before his said invention, and which at the time of his application for a patent, as hereinafter mentioned, had not been for more than two years in public use, or on sale with his consent or allowance.

92 And your orator, on information and belief, further shows unto your honors that he being so as aforesaid the first inventor and discoverer of said improvements, and being also a citizen of the United States, did, on the twenty-third day of September, 1856, upon due application therefor, obtain letters patent of the United States for said invention, in due form of law, under the seal of the Patent Office of the United States, signed by the Secretary of Interior and countersigned by the Commissioner of Patents of the United States, bearing date the day and year last aforesaid, whereby there was granted and secured to him, his heirs, administrators or assigns, for the term of fourteen years from and after the date of said letters patent, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used the said invention and improvements, as set forth in said letters patent, which are now remaining on record in the Patent Office of the United States; and by virtue whereof he became and was the sole owner of

93 all the rights and privileges granted and secured, or intended to be granted and secured, in and by said letters patent.

And your orator further shows unto your honors that having for good and lawful cause surrendered said letters-patent to the Commissioner of Patents, and having made due application therefor, and having in all things complied with the acts of Congress in such case made and provided, did, on the twelfth day of October, 1869, obtain new letters patent, being for the same invention, for the residue of said term, and were issued in due form of law, under the seal of the Patent Office of the United States, signed by the Secretary of the Interior and countersigned by the Commissioner of Patents, and bearing date the day and year last aforesaid, as by the said last-mentioned letters patent now remaining of record in the Patent Office will appear.

And your orator further shows unto your honors that he, having for good and lawful cause surrendered said last-mentioned letters

94 patent to the Commissioner of Patents, and having made due application therefor, and having in all things complied with the acts of Congress in such case made and provided, did, on the 14th day of June, 1870, obtain*ed* new letters patent for the same invention, for the residue of said term of fourteen years; which said last-mentioned letters patent were issued in due form of law, under the seal of the Patent Office of the United States, signed by the Secretary of the Interior and countersigned by the Commissioner of Patents, and bearing date the day and year last aforesaid, as by the said last-mentioned letters patent, or a duly authenticated copy thereof in court to be produced, will appear.

And your orator further shows unto your honors that on the seventeenth day of September, 1870, upon the application of your orator, and after due proceedings had in all respects as required by law, the Commissioner of Patents granted an extension of said letters patent for the term of seven years from and after the expiration of the first

95 term thereof, and made a certificate of extension on said patent,

In the circuit court of the United States for the southern district of New York. In equity.

HOSEA BALL
vs.
JOHN T. WILSON.

The answer of the above-named respondent to the bill of complaint of Hosea Ball, the above-named complainant.

This respondent, now and at all times hereafter saving and reserving unto himself all and all manner of benefit and advantage of ex-
102 ception which may be had or taken to the manifold errors and insufficiencies of the said bill of complaint, for answer thereunto, or unto so much thereof as he is advised it is material or necessary for him to make answer unto, answering, says:

That he admits that the said complainant did, on the 23d day of September, 1856, obtain letters patent of the United States purporting to be for a new and useful improvement in ovens, signed and sealed and countersigned and dated as in said bill set forth; and that by virtue of such grant the said complainant became the sole owner of all the rights and privileges granted or secured thereby.

And this respondent, further answering, says that he admits that the said complainant did, on the 12th day of September, 1869, obtained new or reissued letters patent purporting to be for the same invention as that shown and described in the aforesaid letters patent granted to the said complainant on the said 23d day of September, 1856; but this respondent denies that the said complainant had good and lawful
103 cause for surrendering said first-mentioned original letters patent; and he further denies that the said complainant in all things complied with the acts of Congress in such case made and provided; and he denies that the same were issued in due form of law; and he alleges that the said reissued letters patent were obtained by fraud and were void and had no legal effect whatever.

And this respondent, further answering, says that he admits that the said complainant did, on the 14th day of June, 1870, obtain new or reissued letters patent purporting to be for the same invention as that above and described in the hereinabove first-mentioned or original letters patent; but he denies that said complainant had good and lawful cause for surrendering said first above-mentioned reissued letters patent, and he denies that the said last-mentioned reissued letters patent were properly or lawfully granted.

And this respondent, further answering, admits that the said
104 complainant did obtain an extension to the said last-mentioned reissued letters patent granted June 14, 1870, for the term of seven years from and after the 23d day of September, 1870.

And this respondent, further answer', denies that the said complainant is the sole and exclusive owner of the said letters patent and invention, and of all the rights and privileges granted and secured or intended to be granted and secured thereby; and this respondent further denies that the said complainant has invested and expended large sums of money and been to great trouble in and about said alleged invention for the purpose of carrying on the business and manufacturing and selling said ovens and making the same profitable to himself and useful to the public; and this respondent denies that ovens have been, and now are, being made according to said invention and sold by

said complainant to great advantage to the public; and this respondent denies that the public have generally acknowledged and acquiesced in the alleged rights of the said complainant.

105 And this respondent, further answering, denies, upon information and belief, that the said complainant was the first and original inventor of the improvement in ovens claimed by the said complainant in and by the first and second clauses of the claim of the said last-mentioned reissued letters patent, or of any substantial or material part thereof, but avers that long prior to the alleged invention thereof by the said complainant, the said improvement, and every substantial and material part thereof, was described and illustrated in the following printed publications and letters patent:

Encyclopedie Brevet Boulanger negociant engrains Meunier et Constructeur de Moulins, par Julia de Foutonelle et P. M. N. Benoit. Nouvelle edition, par M. F. Malepeyre, Paris, 1856. Description and diagram of the Covelet oven, vol. 1, p. 398, figure 367, pl. 16, vol. II.

Memoire sur la Meuniere la Boulanger, par Aug. Rollet, Paris, 1847. See more particularly pl. 46, fig. 12, pl. 48, figs. 13, 14, 16, 17, 18, and 19; and pl. P and description in text of ovens illustrated by said figures.

106 French letters patent granted to Covelet for bake-ovens June 13, 1846, June 7, 1847, June 12, 1847, Oct. 19, 1848.

French letters patent granted Mathieu Covrot for oven for bake-houses, dated March 31, 1840.

French letters patent granted to Alex. Selligne, for bake-oven, dated Sept. 24, 1829.

French letters patent granted to Jean Laure for bake-oven, dated Oct. 17, 1825.

U. S. letters patent No. 7778 granted to Hosea Ball on the 19th November, 1850.

English letters patent granted to James Smith for imp'ts in baking ovens, sealed Sept. 1, 1854, and dated 9th March, 1854, No. 562.

English letters patent granted to Isaac Coffin for an invention entitled "A new invention of a perpetual oven for the baking of all kinds of bread," sealed May 15, 1810, No. 3337.

And this respondent, further answering, says that he admits that he is using, and causing others to use, ovens for baking bread, crack-

107 ers, etc., but this respondent denies that he has used or caused others to use any oven containing or embodying the alleged invention described and claimed in and by the aforesaid reissued letters patent to said complainant, dated June 14, 1870; but that on the contrary this respondent alleges that the ovens so used or caused to be used by him are constructed on different principles from the oven shown and described in the said complainant's said letters patent.

And this respondent, further answering, says that the ovens he has used, or caused others to use, as alleged in said bill of complaint, were made, built, or constructed in accordance with the description contained in the schedule attached to letters patent of the United States granted to Mary Ann Eliza McKenzie as sole assignee of one Duncan McKenzie, on the first day of May, 1860, for an improvement in bake-ovens, which said letters patent were reissued in due form of law to said assignee on the 19th day of April, 1870.

108 And this respondent, further answering, alleges that he has full license and authority to use and cause others to use ovens constructed and operating in the manner shown and described in said letters patent to said McKenzie; and he further alleges that he does not

infringe upon any right of the said complainant in the use by him of said ovens constructed as aforesaid, and that he cannot be compelled to make a disclosure to said complainant of any gains or profits he may have realized by reason of the use of said ovens so used by him and his employees as aforesaid.

And this respondent, further answering, denies that thes aid complainant is entitled to the relief, or any part thereof, in the said complaint demanded.

And this respondent prays the same advantage of his aforesaid answer as if he had pleaded or demurred to the said bill of complaint. Without this, that any other matter or thing therein contained and not specifically admitted or denied is true to the knowledge or belief of this respondent.

109 All of which matters and things this respondent is ready and willing to aver, maintain, and prove, as this honorable court shall direct, and prays hence to be dismissed with his reasonable costs and damages in this behalf most wrongfully sustained.

JOHN T. WILSON.

M. M. LIVINGSTON,
Solicitor for Respondent.
KELLER & BLAKE,
Of Counsel.

UNITED STATES OF AMERICA,
Southern District of New York, ss:

On the day of February, 1871, before me came the above-named John T. Wilson, the respondent named in the foregoing answer, and who has signed the same, and he being by me duly sworn, did depose and say that he has read the said answer and knows the contents thereof, and that the same is true of his own knowledge, except as to the matters which are therein stated on information and belief, and that as to those matters he believes it to be true.

[SEAL.] T. B. BEECHER,
Notary Public.

110 U. S. circuit court S. district of N. Y. In equity.

HOSEA BALL }
vs. }
JOHN T. WILSON. }

The replication of Hosea Ball, complainant, to the answer of John T. Wilson, defendant.

This repliant, saving and reserving to himself, now and at all times hereafter, all and all manner of benefit and advantage of exception which may be had or taken to the manifold insufficiencies of the said answer, for replication thereunto, says that he will aver, maintain and prove his bill of complaint to be true, certain, and sufficient in the law to be answered unto, and that said answer of the said defendant is uncertain, untrue, and insufficient to be replied unto by this repliant; without this, that any other matter or thing whatsoever in the said answer contained, material or effectual in the law to be replied unto, and not herein and hereby well and sufficiently replied unto, confessed and avoided, traversed or denied, is true; all which matters and things this repli-

111 ant is and will be ready to aver, maintain, and prove as this hon-

orable court shall direct, and humbly prays as in and by his said bill he has already prayed.

GEO. GIFFORD,
Sol'r and of Counsel for Complainant.

At a stated term of the circuit court of the United States of America for the southern district of New York, held at the United States court rooms in the city of New York, on Friday, the twenty-eighth day of March, in the year of our Lord one thousand eight hundred and seventy-three.

Present, the Hon. Lewis B. Woodruff, circuit judge.

HOSEA BALL
vs.
JOHN T. WILSON. } In equity.

This cause having heretofore been brought to a hearing on the pleadings and proofs therein, and having been argued by George Gifford for complainant, and by Andrew J. Todd for defendant, and due deliberation had thereon, it is on motion of Geo. Gifford, for said complainant, ordered, adjudged, and decreed as follows:

112 That the letters patent No. 4026, granted and issued on the 14th day of June, 1870, to the complainant are good and valid.

That the said complainant was the first and original inventor and discoverer of the improvement in ovens described and claimed in the said letters patent, and that the said complainant is the exclusive owner of said letters patent.

That the said John T. Wilson, defendant herein, has infringed upon the first claim of said letters patent, and upon the exclusive rights of the complainant under the same.

And it is further ordered, adjudged, and decreed that the complainant do recover of the defendant the profits which the said defendant has received or made, or which have arisen or accrued to him from the said infringement since the fourteenth day of June, 1870, and also that the complainant recover from the defendant the damages sustained by him by reason of said infringement.

113 And it is further ordered, adjudged, and decreed that the said complainant do recover of the said defendant his costs and charges and disbursements in this suit to be taxed.

And it is further ordered, adjudged, and decreed that it be referred to Kenneth G. White, esquire, one of the masters of this court, residing in the city of New York, to ascertain and take and state and report to the court an account of the said profits, and also the amount of damages sustained by said complainant from said infringement.

And it is further ordered, adjudged, and decreed that the complainant, on such accounting, have the right to cause an examination of said defendant ore tenens or otherwise, and also the production of the books, vouchers, and documents of said defendant, and that the said defendant attend for such purpose from time to time as said master shall direct.

And it is also further ordered, adjudged, and decreed that a perpetual injunction be issued in this suit against the said defendant, restraining

114 him, his agents, clerks, servants, and all claiming or holding under or through him, from making or selling or using or in any manner disposing of any ovens embracing the invention or

improvements claimed in the first claim of said letters patent pursuant to the prayer of the said bill of complaint.

L. B. WOODRUFF,
Circuit Judge.

I, Kenneth G. White, clerk of the U. S. circuit court for the southern district of New York, hereby certify that the within is a true copy from the original records on file in this court of the bill of complaint, answer, replication, and decree in the suit of Hosea Ball against John T. Wilson.

Witness my hand and the seal of the court affixed hereto this 7th day of April, 1873.

[SEAL.] KENNETH G. WHITE, *Clerk.*

Filed M'ch 28, 1873.

(Endorsed:) 6811. U. S. circuit court. No. 10. Offered by plaintiffs June 13, '73. (Signed) F. B. Vinot, d'y clerk.

Offered in evidence by compl'ts on pages 50 & 51 of the testi-
115 mony, and marked Exhibit No. 10 for identification.
New Orleans, Sept. 2d, 1873.
(Signed) D. URBAN,
U. S. Comm'r & Special Examiner.

DOCUMENT No. 11.

In the circuit court of the United States. In equity.

To the honorable the judges of the circuit court of the United States for the southern district of New York:

Hosea Ball, doing business in the city of New York, and a citizen of the State of New York, brings this his bill of complaint against Thomas R. Harris, residing and doing business in the city of New York, and a citizen of the State of New York.

And thereupon your orator complains and says:

That he is the original and first inventor of new and useful improvements in ovens, fully described in the letters patent hereinafter mentioned, and which had not been known or used before his said invention, and which at the time of his application for a patent, as hereinafter mentioned, had not been for more than two years in public
116 use or on sale with his consent or allowance.

And your orator, on information and belief, further shows unto your honors that he being so as aforesaid the first inventor and discoverer of said improvements, and being also a citizen of the United States, did, on the twenty-third day of December, 1856, upon due application therefor, obtain letters patent of the United States for said invention in due form of law, under the seal of the Patent Office of the United States, signed by the Secretary of the Interior and countersigned by the Commissioner of Patents of the United States, bearing date the day and year last aforesaid, whereby there was granted and secured to him, his heirs, administrators, or assigns, for the term of fourteen years from and after the date of said letters patent, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used the said invention and improvements, as set forth in said letters patent, which are now remaining on record in the Patent Office of the United States, and by virtue whereof he be-

came and was the sole owner of all the rights and privileges
117 granted and secured, or intended to be granted and secured, in and by said letters patent.

And your orator further shows unto your honors that he having, for good and lawful cause, surrendered said letters patent to the Commissioner of Patents, and having made due application therefor, and having in all things complied with the acts of Congress in such case made and provided, did, on the twelfth day of October, 1869, obtain new letters patent, being for the same invention, for the residue of said term, and were issued in due form of law under the seal of the Patent Office of the United States, signed by the Secretary of the Interior and countersigned by the Commissioner of Patents, and bearing date the day and year last aforesaid, as by the said last-mentioned letters patent now remaining of record in the Patent Office will appear.

And your orator further shows unto your honors that the having, for good and lawful cause, surrendered said last-mentioned letters patent to the Commissioner of Patents, and having made due application therefor, and having in all things complied with the acts of Congress
118 in such case made and provided, did, on the fourteenth day of June, 1870, obtain new letters patent for the same invention for the residue of said term of fourteen years; which said last-mentioned letters patent were issued in due form of law, under the seal of the Patent Office of the United States, signed by the Secretary of the Interior and countersigned by the Commissioner of Patents, and bearing date the day and year last aforesaid, as by the said last-mentioned letters patent, or a duly authenticated copy thereof, in court to be produced, will appear.

And your orator further shows unto your honors that on the seventeenth day of September, 1870, upon the application of your orator and after due proceedings had in all respects as required by law, the Commissioner of Patents granted an extension of said letters patent for the term of seven years from and after the expiration of the first term thereof and made a certificate of extension on said patent, and entered the same on record in the Patent Office in due form of law, and thereupon the
119 said letters patent were renewed and extended, and as he was advised and believes had the same effect in law as though they had been originally granted for the term of twenty-one years from the 23d day of December, 1856.

And your orator further shows unto your honors that by virtue of the premises he became and now is the sole and exclusive owner of said letters patent and invention, and of all the rights and privileges granted and secured, or intended to be granted and secured thereby, and that since he became the owner thereof, as aforesaid, he has invested and expended large sums of money, and has been to great trouble in and about said invention, and for the purpose of carrying on the business and manufacturing and selling said ovens and making the same profitable to himself and useful to the public; and that said invention has been and is of great benefit and advantage, and that ovens have been and now are being made according to said invention, and sold by your orator to great advantage to the public; and that the public have generally acknowledged and acquiesced in the aforesaid rights of
120 your orator; and your orator believes that he will realize and receive large gains and profits thereupon if infringements by said defendant and his confederates shall be prevented.

Yet the said defendant, well knowing the premises, and the rights secured to your orator as aforesaid, but contriving to injure your orator

and to deprive him of the benefits and advantages which might and otherwise would accrue unto him from said invention, after the issuing of the last-mentioned reissued letters patent as aforesaid, and before the commencement of this suit, did, as your orator is informed and believes, without the license or allowance and against the will of your orator, and in violation of his rights and in infringement of the aforesaid letters patent, unlawfully and wrongfully and in defiance of the rights of your orator, use and cause others to use the said invention, and did use and cause others to use ovens made according to and employing and containing said invention, and that he still continues so to do, all in defiance of the rights acquired by and secured to your orator as aforesaid, and to his great and irreparable loss and
121 injury, and by which he has sustained great damage and has been and still is being deprived of great gains and profits which he might and otherwise would have obtained, but which have been received and enjoyed, and are being received and enjoyed, by the said defendant by and through his aforesaid unlawful acts and doings.

And your orator further shows unto your honors, on information and belief, that said defendant, since the last of said reissues was granted, has used and is now using one or more of said ovens, and has made and realized large profits and advantages therefrom, and, as your orator believes, more than seventy thousand dollars, but how much exactly your orator does not know, and prays a discovery thereof; and your orator says that the use of said invention by said defendant and his preparation for and avowed determination to continue the same, and his other aforesaid unlawful acts in disregard and defiance of the rights of your orator, have the effect to encourage and induce others to venture to infringe said patent in disregard of your orator's rights.

122 And your orator further shows unto your honors that he has caused notice to be given to said defendant of said infringements and of the rights of your orator in the premises, and requested him to desist and refrain therefrom; but he has disregarded said notice, and refused to desist from said infringements and still continues to use said ovens.

And forasmuch as your orator can have no adequate relief, except in this court, to the end, therefore, that the said defendant may, if he can, show why your orator should not have the relief hereby prayed, and may, upon his corporal oath and according to his best and utmost knowledge, remembrance, information, and belief, full, true, direct, and perfect answers make to the premises, and to all the several matters hereinbefore stated and charged, as fully and particularly as if severally and separately interrogated as to each and every of said matters, and may be compelled to account for and pay to your orator the profits by him acquired and the damages suffered by your orator from the aforesaid unlawful acts.

And your orator prays that said defendant, Francis R. Harris,
123 his servants, agents, attorneys, and workmen, and each and every of them, may be restrained and enjoined by the order and injunction of this honorable court from directly or indirectly making, constructing, using, vending, delivering, working, or putting into practice, operation, or use, or in anywise counterfeiting or imitating the said invention, or any part thereof, or any ovens made in accordance therewith, or like or similar to those which he has heretofore made, and that the said defendant may be decreed to pay the costs of this suit, and that your orator may have such further relief, or such other relief, as to

this honorable court shall seem meet and as shall be agreeable to equity.

May it please your honor to grant unto your orator the writ of injunction issuing out of and under the seal of the honorable court, commanding, enjoining, and restraining the said defendant, Thomas R. Harris, and his servants, agents, attorneys, and workmen, and each and every of them, as is hereinbefore in that behalf prayed.

May it please your honors to grant unto your orator the writ of subpœna issuing out of and under the seal of this honorable court,
124 directed to the said defendant, commanding him by a certain day, and under a certain penalty, to be and appear in this honorable court, then and there to answer the premises, and to stand to and abide such order and decree as may be made against him.

And your orator will ever pray, etc.

HOSEA BALL.

GEO. GIFFORD, *Comp't's Sol'r.*,
34 Beach st., New York, of Counsel.

UNITED STATES OF AMERICA,
Southern District of New York, ss:

On this 1st day of November, 1870, before me personally appeared Hosea Ball, the above-named complainant, who, being by me duly sworn, deposes and says that he has read the foregoing bill of complaint subscribed by him, and knows the contents thereof, and that the same is true of his own knowledge, except as to the matters therein stated on information and belief, and as to those matters he believes it to be true.

[SEAL.] WM. CLITUS WITTER,
Notary Public N. Y. Co.

In the circuit court of the United States for the southern district of New York. In equity.

125 HOSEA BALL
vs.
THOMAS R. HARRIS.

The answer of Thomas R. Harris, the above-named respondent, to the bill of complaint of Hosea Ball, the above-named complainant.

This respondent, now and at all times hereafter, saving and reserving to himself all and all manner of benefit and advantage of exception which may be had or taken to the manifold errors and insufficiencies of the said bill of complaint, for answer thereunto, or unto so much thereof as he is advised it is material or necessary for him to make unto, answering, says that he admits, on information and belief, that the said complainant did, on the 23d day of September, 1856, obtain letters patent of the United States purporting to be for a new and useful improvement in ovens, signed and sealed and countersigned and dated as in said bill set forth, and that by virtue of such grant the said complainant became the sole owner of all the rights and privileges granted or secured thereby.

And this respondent, further answering, says that he is informed and believes, and therefore admits, that the said complainant did,
126 on or about the 14th day of October, 1869, obtain new or reissued letters patent purporting to be for the same invention as that shown and described in the aforesaid letters patent granted to the said

complainant on the said 23d day of September, 1856; but this respondent denies that the said complainant had good and lawful cause for surrendering said first-mentioned or original letters patent; and he further denies that the said complainant in all things complied with the acts of Congress in such case made and provided; and he denies that the same were issued in due form of law; and he alleges that the said reissued letters patent were obtained by fraud and were void, and had no legal effect whatsoever.

And this defendant, further answering, says that he admits, on information and belief, that the said complainant did, on the 14th day of June, 1870, obtain new or reissued letters patent purporting to be for the same invention as that shown and described in the hereinbefore first-mentioned or original letters patent; but he denies that the said complainant had good and lawful cause for surrendering said
127 first above-mentioned reissued letters patent, and he denies that the said last-mentioned reissued letters patent were properly or lawfully granted.

And this respondent, further answering, admits that the said complainant did obtain an extension of the said last-mentioned reissued letters patent granted June 14, 1870, for the term of seven years from and after the 23d day of September, 1870.

And this respondent, further answering, denies that the said complainant is the sole and exclusive owner of the said letters patent and invention, and of all the rights and privileges granted and secured, or intended to be granted and secured thereby; and this respondent further denies that the said complainant has invested and expended large sums of money and been to great trouble in and about said alleged invention for the purpose of carrying on the business and manufacturing and selling said ovens, and making the same profitable to himself and useful to the public; and this respondent denies that ovens have been, and now are being, made to said invention and sold by said complainant to great advantage to the public; and this respondent
128 denies that the public have generally acknowledged and acquiesced in the alleged rights of the said complainant.

And this respondent, further answering, denies, upon information and belief, that the said complainant was the first and original inventor of the improvement in ovens claimed by the said complainant in and by the first and second clauses of the claim in the said last-mentioned reissued letters patent, or of any substantial or material part thereof, but avers that long prior to the alleged invention thereof by the said complainant, the said improvement, and every substantial or material part thereof, was described and illustrated in the following printed publications and letters patent:

Encyc'opedie Roret Boulanger, negociant en gravins, meunier et constructeur de moulins, par Julia de Fontenelle et P. M. N. Benoit, nouvelle edition, par M. F. Malepeyre, Paris, 1856. Description and diagram of the Covelet oven, Vol. I, p. 398, Figure 367, Pl. 16, Vol. II.

Mémoire sur la meunière la Boulanger par Aug. Rollet, Paris, 1847. See more particularly Pl. 46, Fig. 12; Pl. 48, Figs. 13, 14, 16, 17,
129 18 and 19, and Pl. R., and description in text of ovens, illustrated by said figures.

French letters patented to Covelet for bake-ovens, June 13, 1846; June 7, 1847; June 12, 1847; Oct. 19, 1848.

French letters patent granted to Mattieu Corrot, for oven for bakehouses, March 31, 1840.

French letters patent granted to Alienn Fr. Selligue, for bake-ovens, dated Sept. 24, 1829.

French letters patent granted to Jean Laure, for bake-oven, dated Oct. 17, 1825.

U. S. letters patents No. 7778, granted to Hosea Ball, on the 19th November, 1850.

English letters patent granted to James Smith, for imp'ts in baking ovens, sealed Sept. 1, 1854, and dated 9th March, 1854, No. 562.

English letters patents granted to Isaac Coffin for an invention entitled "A new invention of a perpetual oven for the baking of all kinds of bread;" sealed May 15, 1810, No. 3337.

And this respondent, further answering, says that he admits that he is using one oven and no more for baking bread, crackers, etc.,
130 but respondent denies that he has used, or caused others to use, any oven containing or embodying the alleged invention described and claimed in and by the aforesaid reissued letters patent to said complainant, dated June 14, 1870, but that on the contrary, this respondent alleges that the oven so used by him is constructed on different principles from the oven shown and described in the said complainant's said letters patent.

And this respondent, further answering, says that the oven he has used, as alleged in said bill of complaint, was made, built, or constructed in accordance with the description contained in the schedule attached to letters patent of the United States, granted to Mary Ann Eliza McKenzie on the first day of May, 1860, for an improvement in bake-ovens, which said letters patent were reissued in due form of law to said assignee on the 19th day of April, 1870.

And this respondent, further answering, alleges that he has full license and authority to use and cause others to use the oven constructed and described in said letters patent to said McKenzie; and he further
131 alleges that he does not infringe upon any right of the said complainant in the use by him of said ovens constructed as aforesaid, and that he cannot be compelled to make a disclosure to said complainant of any gains or profits he may have realized by reason of the use of said ovens so used by him and his employees as aforesaid.

And this respondent, further answering, denies that the said complainant is entitled to the relief, or any part thereof, in the said complaint demanded.

And this respondent prays the same advantage of his aforesaid answer as if he had pleaded or demurred to the said bill of complaint. Without this, that any other matter or thing therein contained and not specifically admitted or denied, is true to the knowledge or belief of this respondent.

All of which matters and things this respondent is ready and willing to aver, maintain, and prove as this honorable court shall direct, and prays hence to be dismissed with his reasonable costs and damages in this behalf most wrongfully sustained.

(Signed) THOMAS R. HARRIS.
Notary Public, N. Y. Co.

132 U. S. circuit court S. district N. Y. In equity.

HOSEA BALL
vs.
THOMAS R. HARRIS.

The replication of Hosea Ball, complainant, to the answer of defendant.

This repliant, saving and reserving to himself now, and at all

times hereafter, all and all manner of benefit and advantage of exception which may be had or taken to the manifold insufficiencies of the said answer, for replication thereunto says that he will aver, maintain, and prove his bill of complaint to be true, certain, and sufficient in the law to be answered unto; and that the said answer of the said defendant is uncertain, untrue, and insufficient to be replied unto by this repliant without this, that any other matter or thing whatsoever in the said answer contained, material or effectual in the law to be replied unto, and not herein and hereby well and sufficiently replied unto, confessed and avoided, traversed or denied, is true; all which matters and things repliant is and will be ready to aver, maintain, and prove, as this
133 honorable court shall direct, and humbly prays as in and by his said bill he has already prayed.

GEO. GIFFORD,
Sol'r and of Counsel for Complainant.

At a stated term of the circuit court of the United States of America for the southern district of New York, held at the United States court rooms in the city of New York, on Friday, the 20th day of December, in the year of our Lord one thousand eight hundred and seventy-two:

Present, the Honorable Samuel Blatchford, district judge.

HOSEA BALL
vs.
THOMAS R. HARRIS. } In equity.

This cause having heretofore been brought to a hearing upon the pleadings and proofs therein, and having been argued by George Gifford for complainant, and by W. B. Putney for defendant, and due deliberation had thereon, it is, on motion of Geo. Gifford, for said complainant, ordered, adjudged, and decreed as follows:

That the letters patent No. 4026, granted and issued on the
134 14th day of June, 1870, to the complainant, are good and valid.

That the said complainant was the first and original inventor and discoverer of the improvement in ovens as described and claimed in the said letters patent, and that the said complainant is the exclusive owner of said letters patent.

That this said Thomas R. Harris, defendant herein, has infringed upon the said letters patent, and upon the exclusive rights of the complainant under the same.

And it is further ordered adjudged, and decreed that the complainant do recover of the defendant the profits which the said defendant has received or made, or which have arisen or accrued to him from the said infringement since the fourteenth day of June, 1870, and also that the complainant recover from the defendant the damages sustained by him by reason of said infringement.

And it is further ordered, adjudged, and decreed that the complainant do recover of the defendant his costs and charges and disbursements in this suit to be taxed.

And it is further ordered, adjudged, and decreed that it be re-
135 ferred to Kenneth G. White, esq., one of the masters of this court, residing in the city of New York, to ascertain and take and state and report to the court an account of the said forfeits, and also the amount of damages sustained by said complainant from said infringement.

And it is further ordered, adjudged, and decreed that the complain-

ant on such accounting have the right to cause an examination of said defendant ore tenus or otherwise, also the production of the books, vouchers, and documents of said defendant, and that the said defendant attend for such purpose before said master from time to time as said master shall direct.

And it is also further ordered, adjudged, and decreed that a perpetual injunction be issued in this suit against the said defendant restraining him, his agents, clerks, servants, and all claiming or holding under or through him, from making or selling or using, or in any manner disposing of any ovens embracing the invention or improvements claimed in the said letters patent pursuant to the prayer of the said bill of complaint.

SAM'L BLATCHFORD.

U. S. circuit court southern dist. of New York.

136 I, Kenneth G. White, clerk of the U. S. circuit court for the southern district of New York, hereby certify that the foregoing documents are true copies from the original records on file in my office of the bill of complaint, answer, replication, and decree in the case of Hosea Ball against Thomas R. Harris.

In witness whereof I have hereunto set my hand and caused the seal of this court to be affixed this 8th April, 1873.

[SEAL.] (Signed) KENNETH G. WHITE,
Clerk.

(Endorsed:) U. S. circuit court. 6811. No. 11. Offered by p'l'ff's June 13, 1873. (Sig.) F. B. Vinot, d'y clerk.

Offered in evidence by compl't on page 49 of the testimony and marked Exhibit No. 11 for identification.

New Orleans, Sept. 2d, 1873.

(Sig.) D. URBAN,
U. S. Comm'r & Special Examiner.

DOCUMENT No. 12.

Offered by pl'ffs June 13, 1873.

U. S. circuit court, 5th judicial circuit, district of Louisiana. In equity.

137 BALL ET ALS., COMPLAINANTS, *vs.* HALL ET ALS. } No. 6811.

I have worked in the battery of Baumgarden & Langle's, in New Orleans, and have seen the new reel oven set up and operated by them frequently at work. I have broke dough for baking in the oven to the extent of twenty-eight barrels of flour per day, ordinary working. I am a baker by profession.

his
MOSES + WILLIAMS.
mark.

Witness:
J. W. GURLEY.

U. S. AMERICA.
State & District of Louisiana:

Personally appeared before me the above-named Moses Williams, who, having first been duly by me cautioned and sworn, read, and the foregoing deposition, with the declaration under oath that it was in all respects true and within his own personal knowledge.

his
MOSES + WILLIAMS.
mark.

NEW ORLEANS, *7th June*, 1873.

Attest:

J. W. GURLEY,
U. S. Com.

U. S. circuit court, 5th judicial circuit and district of Louisiana.
138 In equity.

BALL ET ALS., COMPLAINANTS,
vs.
HALL ET ALS., RESPONDENTS.

Deposition.

I am a baker by profession, and on the 15th day of May, 1873, saw the reel oven set up and operated by Baumgarden & Langles, in New Orleans, at work. From observation, and comparing it with others, its ordinary working capacity should be twenty-five barrels flour per day, or, if worked to its full capacity, thirty-five barrels per day.

HUGH SHIELDS.

U. S. OF AMERICA,
State & District of Louisiana:

Personally appeared before me the above-named Hugh Shields, who, having first been duly cautioned by me and sworn, read and signed the foregoing deposition, with the declaration under oath that it was true and within his own personal knowledge.

New Orleans, 7th June, '73.

Attest:

J. W. GURLEY,
U. S. Com.

139 DOCUMENT NO. 13.

Offered by plaintiffs June 13, 1873.

U. S. circuit court, 5th judicial circuit & district of Louisiana. In equity.

BALL ET ALS., COMPL'TS,
vs.
HALL ET ALS., RESP'D'TS.

Affidavit of Bernard Klotz and Wm. R. Whitaker.

UNITED STATES OF AMERICA,
District of Louisiana:

Personally appeared before the undersigned authority, duly em-

powered, commissioned, and sworn, Bernard Klotz and William R. Whitaker, both residents of New Orleans and witnesses of lawful age, who, having been first duly and severally cautioned and sworn, did depose and say:

That they have seen and inspected the bake-oven of defendants; that it is constructed with an oven like that represented by model C, to them here and now exhibited, with a reel like that shown by model D, to them here and now shown; that the flues in said bake-oven for
140 conducting off the products of combustion open into the sides of the oven; that by the construction of the defendant's oven, the entire products of the fire, except ashes and residuum, pass directly into the oven furnished with the reel, as above described.

BERNARD KLOTZ.
WM. R. WHITAKER.

Sworn to and subscribed before *before* me this 13th day of May, 1873.

F. B. VINOT,
U. S. Comm'r.

DOC'T NO. 14.

Offered by the defendants June 13, 1873.

U. S. circuit court.

HOSEA BALL & AL. } No. 6811.
vs.
JAMES HALL & AL. }

UNITED STATES OF AMERICA,
District of Louisiana, City of New Orleans:

Justin Langles, being duly sworn, says that he is one of the respondents in this cause; that the only ovens in use by these respondents, or any of them, are those in the premises known as Nos. 5 and 9, Triangle Buildings, in this city, and that said premises have been shown to
141 and inspected by Mr. Wm. Clough, whose affidavit is hereto annexed.

JUSTIN LANGLES.

Sworn & subscribed before me this 10th day of June, A. D. 1873.

(Sig.)
R. H. SHANNON,
U. S. Commissioner.

DOCUMENT NO. 15.

Offered by defendants June 13, 1873.

United States circuit court.

HOSEA BALL ET ALS. } No. 6811.
vs.
JAMES HALL ET ALS. }

Affidavit of Wm. Clough.

UNITED STATES OF AMERICA,
District of Louisiana, City of New Orleans, ss:

Personally appeared before the undersigned authority, William Clough, who, being duly sworn, on oath deposes and says:

My name is William Clough; I am fifty-three years old; I reside in

New Orleans; my business is that of consulting and superintending machinist and engineer.

I have been from early life engaged in pursuits of a mechanical or scientific character. I was many years proprietor and manager
142 of a manufactory of railroad coaches and cars, and I connected therewith the manufactory of furniture and some kinds of farm machinery. In my operations I had occasion to use steam-heated kilns, ovens, and various contrivances of a similar nature.

Since 1858 I have been occupied exclusively in a professional capacity as machinist and engineer. During this time I have prepared and prosecuted numerous applications for letters patent of the United States, and other governments, for mechanical discoveries or inventions. I have also testified during the above period in the United States courts as mechanical and scientific expert in numerous patent causes.

I have carefully read a certified copy of the specifications and claims attached to the reissued and extended letters patent of the United States granted to Hosea Ball, number 4026, and dated June 14th, 1870, for bake-oven, upon which the said Ball, together with his assignee, Margaret Haughery, have brought their bill of complaint against James Hall et als., in the fifth judicial circuit and district of Louisiana, and I think I understand the mechanical devices therein described
143 and claimed.

I have carefully read a translation of the specification and claims attached to the French letters patent granted to Louis Joseph Colvet, dated June 14th, 1846, Paris, France, for a circular bake-oven, attached to the above, and two "additional improvements," which are made to form part of the original invention.

In connection with the description of claims of Covlet's contrivance, elaborate drawings, tracings from the original drawings, are shown, by which the construction and operation of his oven is clearly shown. I think I fairly understand the construction and mode of operation of Covlet's oven.

I find the mechanical devices described and claimed as the invention of Hosea Ball, in the certified copy of his reissued and extended letters patent, No. 4026, dated June 14th, 1870, and upon which this suit is based, to be included in the three claims appended to the specification and to be therein clearly and briefly described.

The device included in the first claim of invention consists of
144 a combination of elements which co-operate to produce the result specified. The elements are, first, one or more swinging bread-holders, suspended from the arms or end plates of a rotating reel, in combination with, second, a furnace so arranged and connected that the products of combustion will pass into or through the chamber within which the bread-holders move. What is meant by "swinging bread holders, suspended, &c.," is clearly described in the specification to which the claim is appended. So also the conditions specified in connection with the second element of the claim, that the furnace must be so connected and arranged that the products of combustion* will pass into or through the chamber within which the bread-holders move.

The device included in the second claim of Hosea Ball's patent is also for a combination of elements. These elements are, first, a rotating reel and swinging bread-holders, substantially the same as that which constitutes the first element of the combination in the first claim; and,

* Meaning thereby not the heat alone but the heated gases, these being caused to enter the oven in direct contact with the bread, not being separated by impervious flues or partitions.

second, a flue on one or more sides of the chamber in which the reel rotates, communicating with said chamber through apertures
145 in the wall between them. This second element of the second claim is for the mechanical device by which the second element of the first claim is carried into effect. It provides the means by which the products of combustion will pass into or through the chamber within which the bread-holders move.

The device included in the third claim of Hosea Ball's patent is also for a combination of elements. The first element of the combination is substantially the same as the first element in the first and second claims, to wit, a swinging bread-holder revolving in an oven. This is employed in combination with a contrivance, which is described in the specification and shown in the drawings, the object of which is to provide for discharging the bread automatically from the bread-holders and oven. It consists of a discharging chute and a tripping device, and these together constitute the second element of the combination of Ball's third claim.

Ball's patent is thus found to include three claims of invention; each claim is for a combination, and in each claim the first element of
146 the combination is the same, to wit, swinging bread-holders suspended from the arms or end plates of a rotating reel. In the first claim this element is combined with a furnace so arranged and connected that the products of combustion will pass into and through the chamber within which the bread-holders move. In the second claim, this same element is combined with flues and apertures for conducting the products of combustion into the chamber within which the bread-holders move. In the third claim this same element is combined with a chute or tripping device for automatically discharging the bread from the bread-holders, being in reality for the mechanical contrivance by which this additional improvement is carried into effect.

I have visited and carefully examined the premises, including the ovens made and used by Messrs. Baumgarden & Langles, respondents in this suit, and I have examined the ovens and furnaces used by said Baumgarden & Langles with particular reference to the charges of infringement therein made.

The operation of baking is conducted by Messrs. Baumgarden & Langles in the use of several plain and several mechanical ovens;
147 in the former, or plain ovens, no reels or mechanical contrivances for handling the bread are used; consequently there can be in these ovens no use of the mechanical devices included in the patent of Hosea Hall, and no infringement of his claims.

In one of the ovens employed by Baumgarden & Langles the bread to be baked is moved automatically through the oven by means of an endless chain, which receives the bread at one end of the oven, conveys it through on a horizontal plane, discharging it at the other end, in which course the bread is perfectly baked. In this oven there is no rotating reel and swinging bread-holders; consequently this oven does not embody the combination of elements included in the first, second, or third claims of Hosea Ball. Messrs. Baumgarden & Langles also employ an oven in which they use one or more swinging bread-holders, suspended from the arms or end plates of a rotating reel, in combination with a furnace, the heat of which is employed to bake the bread whil it is automatically conducted through the oven. It is distinctly show in the specification of Hosea Ball that at the date of his patent two

methods of heating the ovens were recognized and employed
148 in the arts. One process provided for heating the oven by means of flues, which conducted the heat around the oven, transmitting it through the material of which the flues were composed to the enclosed space or oven proper; the other method provided a combustion-chamber, from which the heat resulting from the combustion of fuel was conducted directly into the oven and in contact with the bread to be baked.

The principle upon which the oven described in letters patent No. 4026 is constructed embodies the application of this last-mentioned or direct heat as distinguished from transmitted heat, and Hosea Ball, in his reissue, makes a distinct reference to the use of direct heat from the furnace as distinguished from transmitted heat. We are, therefore, to understand the language of the claims of Ball's reissued patent to refer to the use of direct heat, and to be designed to exclude the idea of transmitted heat, and that the novelty of his invention is based upon this peculiar feature of the apparatus.

In the last mentioned oven employed by Baumgarden & Lan-
149 gles, in which I find them to use swinging bread-holders suspended from the arms of a rotating reel revolving in combination with a furnace, I do not find such a combination as that specified in complainant's patent. Inasmuch as the furnace of Baumgarden and Langles's oven is not such a furnace as is distinctly described and provided in Hosea Ball's oven, the latter being a furnace in which, as has been before said, the productions of combustion are passed directly into or through the chamber within which the bread-holders move.

In Baumgarden & Langles' last-mentioned oven the heat for baking is generated in a furnace located outside of the circle of the reel upon which the bread-holders are suspended, and from this conducted around the oven in close flues, the heat resulting from combustion being transmitted through the material composing the flues to the enclosed space in which the bread-holders move. At no point in the passage of the products of combustion from the furnace to the entrance to the chimney is the heat allowed to pass from the flues into the oven or space in which the bread-holders move. The device specified and claimed
150 in Hosea Ball's invention in the first claim attached to his letters patent cannot therefore be embodied in the oven and furnace of Baumgarden and Langles; represents in the suit, moreover, as the device specified and claimed as the invention of Hosea Ball in the second and third claims of invention in his patent No. 4026, are all combination claims, and as the application of direct heat as a mode of applying heat for baking is an element of all of the combinations, the device claimed by Hosea Ball as his invention cannot be embodied in the apparatus used by Baumgarden & Langles, but is excluded therefrom.

I made diligent inquiry for other ovens in use in New Orleans by Baumgarden & Langles that those found at their baking-establishment 5–9 Triangle Buildings, but could learn of no others; and it is my opinion that the baking apparatus of Baumgarden & Langles are confined to the locality specified.

I have examined a carefully-prepared model of the reel oven in use by Baumgarden & Langles, and I mark the same Respondents' Exhibit W. C. No. 1, and made it part of my affidavit in this cause.

In this model the peculiar construction and operation of re-
151 spondents' furnace and oven are distinctly shown.

Should it be assumed that the term products of combustion

employed by Hosea Ball in his reissued letters patent No. 4026 may include the heat above without including the gases, or those products of combustion which, if not intercepted, would enter the space in which the bread-holders move, then in that case the device specified by Hosea Ball would be an embodiement of Covlet's patent, and would be clearly anticipated by that device.

So that if the claim of Hosea Ball does not include the contact of the crude products of combustion with the bread in the oven, but means the heat alone, with the gases and crude products of combustion excluded, then the device included in H. Ball's patent is the same as that presented in Covlet's French patent, and is clearly anticipated thereby.

(Signed) WM. CLOUGH.

Subscribed and sworn to before me this 6th day of June, A. D. 1873.

(Signed) R. H. SHANNON,
U. S. Commissioner.

2319.

Copie du brevet du Sr. Covlet (Louis Joseph), fabricant d'appa-
152 reils de chauffage, à Paris, rue des Magasins, No. 9. En date du 13 juin 1846. Pour un four circulaire à suspension fixe ou rotative, pour la cuisson des pains, patisseries et autres aliments.

(Local Conservatory of Arts and Trades.)

NOTA.—Brevet index: 1ière. Addition, page 6; 2e. Addition, page 10; 3me. Addition, page 12.

Description.

Le caractère distinctif de ce four est de tenir les objets à cuire en suspension, different en cela des fours ordinaires ou les objects reposent sur la sole.

Independamment de cette suspension, il y a continuellement déplacement des étagères sur lesquelles les pains sont disposés, afin de régulariser le calorique ou de le repartir d'une manière égale sur tous les objets à cuire, toute fois la mobilité des étagères suspendues, peut être remplacée par une disposition de tuyaux ou d'embranchement qui distriburacint régulièrement la chaleur à toutes les étagères.

Le dessin ci-joint qui représente les diverses vues de ce four, permettra d'en faire comprendre la disposition qui est remarquable sous le rapport de sa distribution.

La figure 1re, planche 1ière, est la vue de face extérieure du
153 four. La figure 2e est la vue opposée. La figure 3e, planche 2e, est une section verticale du four *du four*. La figure 4e en est une section longitudinale.

Le devant du four est fermé par une plaque de fonte A, dans l'évidement de laquelle sont scellées des briqués.

Une porte centrale intérieure B, se développe au besoin entièrement et se subdivise en deux compartiments que l'on manœuvre sans développer la porte entière. Les portes latérales C C′ ferment l'entrée de deux fours disposés de chaque côté du foyer vers la partie inférieure du four général.

D D′, portes aboutissant à l'embouchure du four proprement dit, et destinées au chargement et déchargement des étagères.

E, indicateur à aiguille et á divisions pour régulariser l'entrée et la sortie des pains de chaque étagère.

F, thermomètre déterminant la chaleur intérieure du four, que l'on peut régler par les valves et soupapes des tuyaux de distribution.

a, figure 2e, pignon dont l'axe correspond au mouvement d'un tourne-broche.

b, roue en contact avec ce pignon, et montée sur un arbre dont le pignon. *c* engrene avec la grande roue *d* placée sur l'arbre *e* qui porte
154 les croisillons des étagères. Cette commande qui existe sur le derrière du four, est supportée par un batis. *f*. Tout le pourtour du four est extérieurement en maçonnerie ; on peut même conserver un vide à l'intérieur de la maçonnerie sur tout son pourtour, pour éviter le rayonnement de la chaleur du four dans l'appartement voisin.

L'organisation intérieure du four est disposée comme suit :

Le foyer G est alimenté de coke ou de houille ; sa grille *g*, dont un barreau est indiqué sous plusieurs vues (voir fig. 5), est constituée dans les conditions les plus favorables à la juste répartition de l'air et à la conservation des barreaux.

(Stamp of Conservatory of Arts & Trades.)

Le foyer est surmonté d'une plaque H qui le ferme supérieurement, une petite voute rapportée I, repose sur cette plaque, et en contrehaut une plaque concave J, garantit les étages inférieurs d'un coup de feu trop vif. Les étagères K, au nombre de six, plus ou moins, sont suspendues aux extrémités de deux croisillons L, de manière à osciller et à occuper une position stable, malgré la mobilité rotative de tout le système.

La flamme et la fumée qui s'élèvent du foyer, prennent la direction indiquée par les flèches des fig. 3 et 4 ; ainsi elles se dirigent à
155 droite et à gauche dans les conduits *h*, arrivées à la partie supérieure, elles redescendent dans les conduits symetriques *i*, à la partie inférieure desquelles la fumée se surchauffe par son passage à l'intérieur de la voute presqu'incandescente I ; puis la fumée s'élève de nouveau dans un troisième parcours vertical *j*, pour se rendre alors dans la cheminée.

Dans ce triple parcours, symétrique de chaque côté, à l'intérieur du four (voir fig. 3), le calorique est utilisé aussi avantageusement que possible. La voute supérieure du four est fermée par des briquettes ; au dessus, est disposé un réservoir d'eau M, à couvercle et à robinet pour le service ; l'eau de ce réservoir s'échauffe facilement par la chaleur intérieure du four, qui n'a à traverser que la faible épaisseur des carreaux de la voute N.

Les fours latéraux OO′, disposés vers la partie inférieure du four à panification, servent pour les rotis et aliments culinaires ; leur présence est nécessitée par le système à suspension des étagères. L'air extérieur débouche par les tuyaux d'appel *l*, qui traversent le massif du foyer G et forment embranchement au pourtour des fours OO′ ; cet air s'é-
156 chauffe à un haut degré en traversant le massif incandescent du foyer, on en règle l'energie par des tirettes à soupapes *m m′* ; à la sortie du circuit des fours OO′, cet air chaud renouvelle l'air du four.

La porte B du foyer G est dessinée intérieurement, fig. 6e, avec conduite d'air qui ont issue sur le côté du foyer, de manière à souffler cet air aux angles de la plaque concave J, pour lancer le calorique du four vers la partie supérieure.

Le mouvement des croisillons des étagères opéré par le tournebroche ou par tout autre moteur à ressort, a pour objet d'effectuer le déplace-

ment continu des étagères, afin de repartir mieux la chaleur pour la cuisson ; certaines parties du four tendent à être d'une température plus élevée ; or le changement de positions des étagères régularise la cuisson.

Le thermométre, en indiquant la température intérieure du four, permet de la régler en donnant issue à la chaleur du four par une soupape adhérente au tuyau de fumée, soupape que l'on manœuvre en conséquence pour donner issue à l'excédent de chaleur.

(Seal.)

Ainsi ce four se fait remarquer par la suspension des étagères
157 qui supportent les pains ou autres aliments, par le déplacement rotatif de ces étagères ; toutefois, dans le cas où ces étagères, resterait ent stationnaires, des tuyaux indiqués en lignes rouges, fig. 3e, aboutissant au foyer ou dans son massif, viendraient distribuer la chaleur à chaque étagère.

Le service de chargement et de déchargement des étagères, est indiqué par l'indicateur à divisions E, qui donne l'ordre successif du service. La chaleur du four se règle par un thermomètre, et on en varie la température par une soupape communiquant du four au tuyau de fumée.

Des soupapes règlent également et distribuent l'air échauffé au pourtour du foyer, à l'intérieur du four pour en renouveler l'air.

La circulation est favorable à la cuisson régulière des pains et des aliments.

Ce four peut aussi s'établir de toutes formes et de toutes dimensions, avec plus ou moins d'étagères ; la suspension des pains ou objets a cuire, présente l'avantage d'une cuisson plus régulière et de disposer dans le même four comparativement une plus grande quantité de pains.

158 Ce four est enfin susceptible de diverses matières pour sa construction.

Paris le 13 Juin 1846.

(Signé) COVLET.

Vu pour être annexé au brevet de quinzeans pris le 13 Juin 1846 par le Sr. Covlet.

Paris, le 11 Août, 1846.

Pour le ministre et par délégation :

Le maître des requêtes, directeur,

(Signé) A. SENAC.

1ière addition au brevet du Sr. Covlet (Louis Joseph) en date du 7 Jun 1847, pour un four circulaire à suspension fixe ou rotative, &ac.

Addition consistant dans le perfectionnement et dans la disposition modifiée du four à suspension et étendant l'emploi du four à la dessication de toutes substance et matériel.

Description.

Cette addition a pour objet, 1°, une disposition perfectionnée du four primitif à suspension ; 2°, une modification que ce systême de four est susceptible de recevoir ; 3°, l'extension de son usage non seulement à la cuisson des pains et aliments, mais aussi à la dessication des substances et matières quelconque.

Le four à suspension dont les dessins annexé à ce mémoire, donnent

deux dispositions spéciales, présente les deux caractères distinctifs suivants: 1°. L'isolement du foyer et sa combustion à l'aide du coke ou charbon de terre, préférablement au bois, que je n'exclue pas cependant dans certains cas; 2°. La suspension des objets à cuire ou à dessecher sur des étagères mobiles dont le déplacement continu et régulier a pour but de repartir le calorique d'une manière égale sur tous les points.

La disposition perfectionée du four est représentée dans les fig. 1, 2, et 3 des planches 1 et 2

(Seal.)

Deux thermomètres *a a'*, dont l'échelle est apparente sur la face extérieure du four, fig. 1re, pl. 1re, donnent d'une manière precise le degré de chaleur intérieure, et permettent d'obtenir dans le travail, une régularité constante pour la cuisson ou la dessication.

Deux séries de tuyaux en fonte ou tôle forte de fer *b b*, isolés de la maçonnerie, circulent en serpentin à l'intérieur contre la paroi du four, et ne laissent partir la fumée que lorsqu'elle a abandonné son calorique au profit du four.

Un cadran *c*, à aiguille indicateur fixe, est placé sur l'axe *d* des étagères *e*, et permet de retirer les objets dans l'ordre où ils ont été enfournés; il porte alors les Nos. 1, 2, 3, 4, et correspondant au nombre variable des étagères *e*, nombre indiqué et limité à quatre sur cette disposition.

Des régistres et soupapes *f*, ménagés aux alentours du foyer *g*, donnent la facilité de régler la chaleur au degré convenable.

Une lampe à réflecteur est placée au fond du four dans l'épaisseur de la maçonnerie, à la hauteur des deux bouches de service *h h'*, et donne dans l'interieur du four, une clarté qui permet d'enfourner et de défourner sans tâtonnement.

Le foyer *g*, qui ainsi que les bouches *h h'*, du four, et les fours secondaires latéraux, sont garnis de portes avec toutes leurs ferrures. Le calorique se réfléchit contre le dôme *l* du foyer. La flamme et la fumée se dirigent alors dans les tuyaux en serpentins *b b* et s'échappent en dernier lieu dans le conduit de cheminée *q*. Quand à l'air chaud, il circule comme l'indiquent les flèches de la coupe longitudinale, fig. 3, pl. 2. La chasse du four est en maçonnerie bardée de tont et de fer, avec un vide dans son épaisseur, formant matelas garni de poussier pour concentrer la chaleur à l'intérieur.

Une disposition modifiée du four à suspension est détaillée dans les coupes, fig. 4 et 5, pl. 3. La circulation de la fumée et de l'air chaud se fait à l'instar de la disposition précedente, à l'aide des tuyaux *b* et des régistres *f*. Le foyer y est également isolé et à dôme mais les étagères *e*, dont le nombre ici est porté á six, au lieu d'être suspendues aux ailes d'un croissillon, sont suspendues à une chaîne sans fin *r*, par l'intermédiare des galets *s*, roulant sur un chemin de fer *t*, or cette chaine qui est guidée et tendue par les roulettes *u*, reçoit son mouvement de translation d'un pignon *v*, dont l'axe est muni d'une manivelle, ou bien est mis en communication avec un méchanisme de tournebroche ou tout moteur analogue.

La mobilité des étagères se fait à volonté, d'une manière permanente ou intermitente; au besoin la position des étagères, peut être stationnaire au moyen de tuyaux qui apporteraient et repartiraient le calorique à chacune d'elles.

La façade de ce four est analogue à celle du four précédent, avec les

mêmes accessoires, et dans l'épaisseur de la maçonnerie, est logée une chaudière *x*, d'une capacité variable, pour le service du pétrin; à
162 cette chaudière aboutit un conduit à robinet pour déverser de l'eau sur la plaque de fonte incandescente du foyer, afin d'obtenir une buée factice pour faire fonctionner le four à la mode allemande.

(Seal.)

Le foyer indiqué, fig. 5, pl. 3, par des hachures sur la teinte, est isolé du reste du four; c'est un foyer mobile sur galets et s'emboitant au point *z* avec les tuyaux fixes *b*, par lesquels s'échappe la fumeé. La bouche du four est fermée par une double porte ou rideau à bascule dont les deux panneaux en fonte sont reliés par une chaine roulante sur des galets y à l'instar des régistres des chaudières à vapeur.

Cette disposition modifiée, me paraît moins simple que la précédente, j'ai cru devoir toutefois l'indiquer pour mémoire, et comme susceptible d'être employée dans certaines localités. Ces deux dispositions reposent sur le même principe de four à suspension ou à étagères qui forme le caractère fondamental de mon invention pour la cuisson et la dessication des pains, aliments et substances en général; mais un point non moins
163 important, est le fait des régistres, qui placés près du foyer, donnent au besoin accès à l'interieur du four, à l'air qui aspiré du dehors, s'échauffe au pourtour du foyer et par son introduction à l'intérieur du four par les régistres, en augmente, règle ou varie la température intérieure.

Paris, le 7 Juin 1847.

(Signé) COVLET.

Vu pour être annexé au certificat d'addition pris le 7 Juin 1847, par le Sr. Covlet.

Paris, le 30 Août 1847.

Pour le ministre et par délégation:

Le maître des requêtes, directeur,

(Signé) A. SENAC.

2ème addition au brevet du Sr. Covlet (Louis Joseph), en date du 12 Juin 1847, pour un four circulaire à suspension fixe ou rotative, pour la cuisson des pains, patisseries, &a.

Addition consistant dans l'emploi d'âtres mobiles en terre réfractaire, pour la suspension des objets à cuire ou à dessécher.

Description.

Independamment du mode à suspension sur des étagères, des objets à cuire en à dessécher, le four formant l'objet de mon invention se fait
164 remarquer par l'ensemble de la disposition, entrautres, par l'emploi de régistres à courant d'air. La fonction de ces régistres, comme je l'ai déjà indiqué, consiste à distribuer, au besoin, à l'intérieur du four, pour en varier la température, un courant d'air, qui puisé, naturellement de l'extérieur par des bouches, s'échauffe au pourtour du foyer.

Je viens appuyer de nouveau sur un point aussi important, le fond mobile des étagères.

J'établis ces fonds mobiles en terre réfractaire disposée en carreaux qui pour des étagères de un mètre de large sur deux mètres de profon-

deur, portent un mètre de large sur cinquante centimètres de profondeur.

(Seal.)

Ces carreaux dont l'épaisseur varie de trois à six centimètres se placent au nombre de quatre à la suite l'un de l'autre pour constituer le fond mobile d'une étagère.

Le dessin annexé à cette demande, fait voir dans la fig. 1re, qui représente l'un de ces carreaux en terre réfractaire ou autre terre cuite, que les carreaux se placent à volonté sur une plaque de tôle reposant sur des équerres ou coulisseaux adhérents aux étagères, ou, comme l'indique la fig. 2e, directement sur les équerres ou coulisseaux des
165 étagères, avec faculté d'être changés ou déplacés au besoin ; ces carreaux dont les dimensions sont d'ailleurs variables, présentent comme caractère distinctif, un fond mobile, ou âtre mobile en terre cuite ou réfractaire.

La fig. 3e du même dessin donne plusieurs vues du foyer avec ses chaudières et un bouilleur au bout du foyer, dans le but de fournir une buée destinée à faire fonctionner le four à la mode allemande.

En résumé, cette addition a pour objet de completer la description des diverses parties perfectionnées et constitutives, contribuant indispensablement à la bonne fonction du système de four à suspension pour la cuisson du pain, des aliments, et dessications des substances et matières en general.

Paris, le 11 Juin 1847.

(Signé) COVLET.

Vu pour être annexé au certificat d'addition pris le 12 Juin 1847.
Paris, le 30 Août 1847.
Pour le ministre et par délégation :
Le maître des requêtes, directeur,
(Signé) A. SENAC.

3me addition au brevet du Sr. Covlet (Louis Joseph), mécani-
166 cien, rue St. Laurent No. 18, à Belleville (Seine), en date du 19 Octobre 1848, pour un four circulaire à suspension, &c., addition consistant dans la pose du dit four sur une voiture.

Description.

Les expériences réitérées sont venues prouver par d'excellents résultats, toutes les prévisions que cette nouvelle combinaison devait amener, l'on peut même dire qu'elles ont été dépassées, car non seulement les pains de toutes sortes ont été cuits avec la plus grande perfection et aussi proprement que l'on peut le désirer, mais l'économie de combustible est telle, que si l'on donnait le chiffre, il paraîtrait incroyable même aux personnes qui ont l'habitude de s'occuper de ces sortes de questions.

(Seal.)

Le gouvernement ayant eu connaissance de cette invention à donner des ordres pour en faire l'acquisition, et je suis en train d'en monter un à la manutention de la guerre à Paris.

Les résultats remarquables et tout à fait extraordinaires, qui je le répète, sont le fruit de l'expérience, m'ont conduit à rechercher, s'il ne serait pas possible de les employer en faveur de l'armée en campagne, qui souvent trouve, soit des farines, soit des blés, et qui pourtant
167 manque de pain ou bien celui que l'on fait est de très mauvaise qualité, faute des appareils nécessaires pour le préparer d'une manière convenable, alors ce pain est loui de réparer les fatigues supportées par les homnes, d'un coté par les intempéries des saisons et de l'autre par les marches forcées, &a., &a.

Ces conditions du reste ont été comprises depuis longtemps, car sous l'empire, l'administration a fait accompagner l'armée par des petits moulins portatifs, il en a été aussi transporté en Afrique, pour l'armée d'occupation ; or donc, il ne serait pas sans importance et sans de grands avantages, d'avoir aussi un four portatif qui puisse cuire parfaitement le pain ou le biscuit avec le minimum de combustible possible.

Dans ce but, j'ai disposé mon four de manière à le monter sur une voiture, de façon qu'il soit le plus transportable possible, tout en l'entourant de matières conservatrices de la chaleur, afin d'éviter les déperditions qui seraient la suite naturelle du mouvement de cette voiture.

En outre, cette voiture-four, ou voiture boulange, peut porter le combustible, des seaux, des panetons, au besoin même, une cure à
168 eau pouvant aussi servir à pétrin le pain.

Cette disposition est représentée en coupe verticale et longitudinale par le dessin ci-joint: On voit en *a*, les surfaces où l'on pose les pains, chaque surface peut conteuir deux rangeés de cinq pains, ce qui fait quarante pains, les surfaces *a'* peuvent recevoir chacune cinq pains, ce qui donnerait soixante pain de un kilogramme cinq cents ou quatre vingt dix kilos de pain qui pourrait être parfaitement cuit en cînquante minutes, soit à l'aide du charbon de terre, ou du bois, soit avec du coke.

On voit que sous le siège *b*, on peut placer les panetons, et que la partie *c*, ou le derrière de la voiture, peut servir de magasin à combustible, des seaux peuvent être placés sous la voiture ainsi que la caisse à eau.

Cette voiture, comme on le voit, peut être monteé sur ressorts avec avant train, afin de faciliter tous les mouvements qu'elle peut avoir besoin d'accomplir.

Pour les dimensions respectives et même la combinaison de toutes les différentes parties, on comprend que je derrai m'entendre avec les officiers du génie et du corps qui s'occupe spécialemeut de la constructions des équipages du train.

(Seal.)

169 Je n'ai voulu ici que constater mon droit spécial à faire un emploi plus étendu de mon four et prouver qu'il peut rendre de véritables services, non seulement aux habitants à demeure fixé, mais encore à l'armée en campagne, aux nouveaux coulons en Afrique, à la marine, &a., car on comprend de quelle importance peut être l'économie de combustible, par exemple, dlans un navire, pour un voyage de long cours, ce qui permet de remplacer le biscuit par du pain frais.

Un verrou est disposé pour empêcher le balancement du mécanisme qui porte les pains afin d'éviter tout accident pendant la marche de la voiture.

Paris, le 19 Octobre 1848.

(Signé) COVLET.

Vu pour être annexé au certificat d'addition pris le 19 Octobre 1848, par le Sr. Covlet.
Paris, le 29 Décembre 1848.
Pour le ministre et par délégation :
Le secrétaire général :
[SEAL.] (Signé) FLEURY.

Pour copie conforme et des plans ci-dessus aux plans originaux déposés aux archives du Conservatoire des Arts et Métiers.
170 Le général de division, directeur du Conservatoire des Arts et Métiers.
[SEAL.] (Signed) MORIN.

Paris, le 12 Février 1873.
Vu pour légalisation de la signature de Mr. le Général Morin, directeur du Conservatoire des Arts et Métiers.
Paris, le 13 Février 1873.
Pour le ministre et par autorisation.
Le conseiller d'état, secrétaire général,
[SEAL.] (Signed) J. V. ZUNIER.

Le ministre des affaires étrangeres certifie véritable la signature de Mr. V. Zunier, Paris, le 13 Février 1873. Par autorisation du ministre:
Par le sous-directeur, chef de la chancellerie,
[SEAL.] (Signed) T. DUBOIS.

Seal of the minister of foreign affairs and the signature of Mr. Dubois duly legalized at the consulate general.
Feb'y 13, 1873.
{ SEAL AMERICAN CONSULATE-GEN'L. } (Signed) F. J. COLE,
U. S. Deputy Consul-General.

(Endorsed:) 6811. Offered by defendants April 3d, 1877, and admitted subject to objections. 6811. Langles offered by defendants, May 20th, 1875. M. T. S., 1.

DOCUMENTS NOS. 16 AND 17.

171 *Translation of Covlet's patents.*

A copy of Louis Joseph Covlet's b'evet.

Oven apparatuses manufacturer, No. 9 rue des Magazins, Paris. Under date June 14th, 1846. For a circular bake-oven, suspended, stationary, or rotatory, for baking bread, confectionary, and other alimentary food.

Description.

The distinctive features of this oven is to hold suspended the bread to be baked, differing, in that, from ordinary ovens, where the bread is laid on the oven bottom or sole.

Apart from this suspension, there is a continual rotation of the shelves, upon which the loaves are laid, in order to regulate the heat or to distribute it in equal parts on all the bread to be baked. However, the motion of the suspended shelves might be substituted by a series of radiating flues, which would uniformly distribute the heat to all the shelves.

The annexed drawing representing the different views of this oven will enable to form a comprehensible idea of the remarkable manner in which its various parts are devised relative to its distributed.

172 Figure 1, plan 1, is the front exterior view of the 'ven.

Figure 2 is the opposite view.

Figure 3, plan 2, is a vertical section of the oven.

Figure 4 is a longitudinal section.

The oven front is closed by a cast-iron plate A, which is fixed with brick work. The lower central door B unfolds itself fully when necessary, and subdivides into two compartments, which are worked without unfolding the entire door. The side doors C C close the opening of two ovens, situated on each side of the furnace, toward the lower part of the oven proper.

D D are doors terminating at the opening of the oven proper, and used for placing on and removing the bread from the shelves.

E is an indicator, for the purpose of regulating the entrance and withdrawing of the bread from the shelves.

F is a thermometer, showing the interior heat of the oven, which may be regulated by the valves and dampers of the flues.

a, figure 2, is a pinion, whose axis corresponds with the motion of a spring-power.

b, a wheel moved by the above pinion, and set on a shaft whose pinion C actuates the large wheel D set on the shaft E; this last shaft

173 carries the arms of the pans. This set of wheels for the transmition of power is supported by a frame F, and is at the rear of the oven.

The whole exterior of the oven is entirely brick work; a space may be left in the interior of the walls, in order to avoid loss of heat through radiation.

The interior arrangement of the oven is as follows:

In the furnace G coal or coke is burnt; its grate *g*, of which a bar is illustrated under different views (see fig. 5), is so constructed as to obtain the most favorable result in the draft of air required and the preservation of the grate bars.

The top of furnace is formed with a cast-iron plate H, a small arch I rests on said plate and a concave plate J protects the lower shelves from the action of too intense a heat. The shelves K, six in number, more or less, are suspended at the ends of the arms L, so as to swing and keep stationary, notwithstanding the rotatory motion of the whole system.

The gases and smoke arising from the furnace follow the direction showed by the arrows in the figures 3 and 4; from there they continue right and left in the flues *h*; when they have reached the top

174 they come down in the flues *i*, in the lower part of which the smoke is superheated in its passage through the interior of the arch I, made almost incandescent; then the smoke arises again through the vertical flue *j*, and finally escapes through the chimney. During that triple transit, sym'etrical on each side of the oven (see fig. 3), the heat generated is utilized to its greatest extent.

The upper arch of the oven is made with small bricks; above the arch for use is a tank M with cover and cock. The water in this tank is easily heated by the interior heat of the oven crossing through the thickness of the arch N.

The lateral ovens O O, situated in the lower part of the oven proper, may be used for the purpose of roasting meat and culinary food. These

small receptacles are due to the form the system of suspended shelves has.

Air enters through the flues *l*, then through the wall forming the furnace G, and radiates around the receptacles O O; that air is heated to a high temperature in its transit through the hot walls of the furnace.

The draft is regulated by dampers *m m*, in its exit from the small
175 ovens O O; that air is thereby used for the oven supply.

Door B of furnace G is an interior drawing (fig. 6) with its air flues, which issues on the side of the furnace, so as to blow that air towards the angles of the concave plate J and send the oven heat toward the upper part.

The motion of the pan arms, transmitted by the spring apparatus, or any other power, has for its object the continual displacement or motion of the shelves, in order to better distribute the heat for the baking, certain parts of the oven having a tendency to be hotter than others; the motion or change of position of the shelves regulates the baking process; while the thermometer indicates the interior temperature of the oven, it facilitates the regulation of the heat, by using a damper, made in the smoke-flue, which damper may be used, if desirable, to get rid of an excess of heat.

Thus, this oven is remarkable by the suspension of the shelves, which hold the bread or other food; by the rotatory displacement of its shelves; however, should these shelves stay stationary, flues indicated in red lines (fig. 3), terminating at the furnace, would distribute the heat to each shelf.

176 The successive operation of placing on and taking the bread off the shelf is shown by an indicator, E, which marks its successive order.

The heat of the oven is regulated by means of a thermometer, and may be varied by using a damper, communicating from the oven, with the smoke-flue.

The draft is also regulated by dampers, which distribute at will the air already heated around the furnace.

The motion is favorable to the baking of loaves and other food.

Finally, this oven may be built in all shapes and in all sizes, with more or less shelves. The suspended position of the loaves or other food to be baked gives them a more uniform baking and allows comparatively the placing of a greater quantity of loaves in the oven.

The building of this oven is not restricted to one particular kind of material, but several may be used.

Second addition to Louis Joseph Covlet's brevet, under date June 12, 1847. For a circular, suspensory bake-oven, stationary or rotatory for the baking of bread, pastry, etc.

176 This addition consists in the use of movable shelves, the bottoms of which are made with suitable tiles for the suspension of objects to be baked or desic'ated.

Description.

Independently of the manner in which the objects to be baked or desic'ated are suspended on shelves, the forming the object of my invention is remarkably by the entirety of its disposition; notably for the use of air-dampers.

The working of these dampers, as I have already mentioned, consists in distributing, when needed, in the interior of the oven, so as to vary

the temperature, a current of air which, attracted from the exterior by opening, is heated around the furnace.

I again call attention to the important fact that of the movable bottom of the shelves: These movable bottoms are clay tiles, in squares, which for shelves 1 metre wide by 2 metres in depth measure 1 metre in width by 50 centimetres in depth. These squares or tiles vary in thickness from 3 to 6 centimetres; and four of said tiles constitute the movable bottom of the shelf.

178 The annexed drawing to this memorial shows in fig. 1 an illustration of one of these tiles, made in any of the usual processes of brick-making; also that these tiles are placed at will on the sheet-iron bottom resting on the angles, enabling the renewal of the same when necessary.

Figure 3 of same drawing gives several views of the furnace with a tank and boilers at the end of the furnace, with the view of furnishing a supply of steam in the oven, after the German fashion. Finally, the object of this addition is to complete the description of the several improved parts, contributing indispensably to the effectual working of the suspensory oven system, for the baking of bread and food and the desic'ation of all substances in general.

Third addition to Louis Joseph Covlet's brevet, under date of October 19th, 1848. For a circular suspensory bake-oven, &c. Addition consisting in the setting or putting of the same on a vehicle.

Description.

179 Repeated experiences have proven by their excellent results the realization of all the expectations that were to arise from this new combination; it may even be said that they have been more than realized, inasmuch that not only loaves of all kinds have been baked with great perfection and with as much cleanliness as may be desired, but the economy of fuel is such that, if figures were given, it would appear incredible, even to persons having experience of such matters.

This invention having come to the knowledge of the government, it has ordered the purchase of one, which I am at present building for the war department in Paris.

These remarkable and extraordinary results, which, I now repeat, are the fruits of experience, have led me to seek whether it would not be practicable to employ the same in favor of the army when out in a campaign, which oftentimes on its route finds flour and wheat, and notwithstanding has no bread, or has bread of a very inferior quality, for

180 the want of a proper apparatus to prepare it in a suitable manner, which (bread) is far from relieving the soldiers from the fatigues of forced marches or the inclemency of the weather, &c., &c.

These facts have been so well understood that, under the empire, the war department had ordered small portable mills to accompany the army; some were also sent to Africa for the use of the army of occupation. It would not, then, be without importance and advantage to have a portable oven capable of baking well the bread or biscuits with the least possible quantity of fuel.

To that end I have arranged my oven so as to set it on a vehicle in order to facilitate its transportation, while at the same time covering it with a suitable substance in order to avoid the loss of heat which would be occasioned by the motion of the vehicle.

Furthermore, this "oven-vehicle" may carry the fuel, the buckets, baskets, and even a small tank, which may also be used for the purpose of kneading the dough.

This combination is shown by the vertical and longitudinal cut in the annexed drawing. A are the surfaces on which the loaves are
181 laid; each surface may hold two rows of five loaves, making forty loaves.

A′ are surfaces holding five loaves each, which would make sixty loaves, weighing one kilogramme, five hundred, or ninety kilogrammes, capable of being baked in fifty minutes with either wood, coke, or coal.

It will be seen that under the seat B the baskets may be stored, and that part, C, or the rear of the vehicle, may be used for the carriage of fuel; the buckets and tanks can be placed under the vehicle.

This vehicle, as may be seen, may be placed on springs with forecarriage in order to facilitate the movements which it may have to undergo.

For the dimensions, and even the respective combination of the different parts, it will readily be understood that an understanding with the engineer corps would be required.

I not only aimed here to establish my sole and exclusive right to make a more extensive use of my oven, and prove that it may be made useful, not only to the inhabitants of cities, but also to an army in a campaign, to the colonist in Africa, to the navy, &c., &c., for it will be un-
182 derstood of what importance the economy of fuel would be, for instance, to a ship during a long voyage, when fresh bread could be substituted *to* hard bread.

A bolt is so arranged as to prevent the swinging of the mechanism holding the loaves in order to avoid all or any accident while the vehicle is under way.

Doc't No. 16, endorsed: U. S. Ct. court. No. 16. 6811. Offered by defendants June 13, 1873. (Signed) F. B. Vinot, d'y clerk.

First addition to Louis Joseph Covlet's brevet, under date June 7th; 1847. For a circular suspensory bake-oven, stationary or rotatory, addition consisting in the improvement and modified arrangement of the suspensory oven, and extending the use of the oven to the dessic'ation of all bodies and matters.

Description.

The object of this addition is to show: 1st, an improved arrangement of the original suspensory oven; 2d, a modification that this system of oven is susceptible of receiving; 3d, the extension of its use to the baking of bread and food, but also to the dessic'ation of all bodies and matters whatsoever.

183 The suspensory oven, the drawings of which are annexed to this memorial, shows two specific dispositions, presenting the two following distinctive features: 1st, the insulation of the furniture and its combustion, aided by coke or coal in preference to wood, which, however, is not excluded in certain cases; 2d, the suspension on movable shelves of matters to bake or dessic'ate, of which the regular and continual displacement has for object the distribution of the heat in an equal manner on all points.

The improved arrangement of the suspensory oven is shown by Fig. 1, 2, & 3 of plans 1 & 2; two thermometers, *a a*, the scales of which are apparent on the exterior front of the oven. Fig. 1st, Pl. 1, give pre-

cisely the degree of heat in the interior, and allows a constant regularity in the labor of baking or desic'ating.

Two series of cast or sheet iron flues, *b b*, insulated from the brick work, extends in a serpentine manner in the interior against the sides of the oven, thereby preventing the smoke from leaving until it has abandoned all its heat to the benefit of the oven.

184 Hand-dial C, as a stationary indicator, is placed on the axis *d* of shelves *i*, and allows the removal of the bread in the order in which it has been placed in the oven. The dial bears the numbers 1, 2, 3, 4, corresponding with the variable number of the shelves *e*, number indicated and limited to 4. On this arrangement the valves and dampers, *f*, placed around the furnace G, gives the facility to regulate the heat to a suitable degree.

A lamp, with a reflector, is placed in the oven in the thickness of the wall to the height of the two openings, *h h*, thereby giving in the interior of the oven a light sufficiently bright to enable to place in and discharge the bread from the shelves without hesitation.

The furnace *g*, which, as well as the openings *hh* of the oven, and the lateral or smaller ovens, are furnished with doors, with all necessary iron work appertaining thereto.

The heat reflects against the arch, L, of the furnace; the gases and smoke are then directed in the serpentine flues, *b b*, and escape
185 lastly in the flue of the chimney, Q; as to the hot air, it circulates as indicated by the arrows of the longitudinal cut, Fig. 3, Pl. 2.

The walls of the oven are brick work, strenght*e*ned with suitable wrought or cast iron plates, with an empty space, left during the building, and filled with any suitable dust or sand, in order to concentrate the heat in the interior of the oven.

A modified arrangement of a suspensory oven is detailed in cut Fig. 4 & 5, plan 3; the circulation of the smoke and hot air is had in a manner similar to the preceding arrangement, aided by flues *b* and dampers *f*, the furnace *g* is equally insulated and arched, but the shelves *e*, of which the number herein is brought up to six, instead of being suspended to the arms, are suspended to an endless chain, *r*, by the aid of rollers, *s*, moving on an iron railway, *t*; now this chain, which is stiffened and guided by rollers *u*, receives its translocative motion from pinion *v* whose axis is provided with a crank, or otherwise is put in communication with a mechanism similar to some spring power, or any other analogous motor.

186 The mobility of the shelves is made at will in a permanent or intermittent manner; if needed, the position of the shelves can be made stationary by means of flues carrying and subdividing the heat to each shelf.

The front of this oven is similar to that of the preceding oven with the same appertainings; over the oven, in the brick work is placed a tank, *x*, of varying size, for the use of the trough; connected with the tank is a cock for the purpose of running water on the hot cast-iron plate, in order to generate a fictitious oven steam, thereby using the oven after the German fashion.

The furnace mentioned, Fig. 5, plan 3, by short cross lines on the blue tint, is insulated from the remainder of the oven. This furnace is movable on rollers and connects at point *z* with stationary flues *b*, through which the smoke escapes.

The mouth of the oven is closed by a double drop-door, the two

panels of which are connected with a chain moving on rollers *y*, similarly worked to boiler-dampers.

This modified arrangement appears to me more complicated than
187 the preceding one; I have thought proper, however, to mention it, as it is susceptible to be employed in certain localities; these two dispositions rest upon the same principle of the suspensory shelf-oven, which forms the fundamental principle of my invention, for the baking of bread and food, and the dessic'ation of all substances in general.

Not less important is the fact that the dampers placed near the furnace admit, when required, in the interior of the oven the air, which, attracted from outside, is heated around the furnace, and by its introduction in the oven through the dampers increases, regulates, or varies the interior temperature.

This first addition to Covlet's patent is thus endorsed: U. S. cir. court No. 6811. No. 17. Offered by defendants June 13th, 1873. F. B. Vinot, d'y clerk.

Translation of certificates attached to Covlet's patent, additions thereto, and to the drawings, made by order of the court.

Original.

188 Pour copie conforme et des plans ci dessus aux plans originaux déposés aux archives du Conservatoire des Arts & Métiers.

Le général de division, directeur du Conservatoire des Arts & Métiers,

MORIN.

Paris, le 13 Février 1873.

Translation.

The foregoing is a true copy of the original, and the above plans are true copies of the original plans deposited in the archives of the conservatory of arts & trades.

The general of division, director of the conservatory of arts & trades.

MORIN.

PARIS, 13*th February*, 1873.

Original.

Vu pour légalisation de la signature de Mr. le Général Morin, directeur du Conservatoire des Arts & Métiers.

Paris, le 13 Février 1873.

Le ministre de l'agriculture et du commerce.

Pour le ministre et par autorisation:

Le conseiller d'état, secrétaire général,

V. ZUNRE.

189 Le ministre des affaires étrangeres certifie véritable la signature de Mr. V. Zunre.

Paris, le 13 Février 1873.

Par autorisation du ministre:

Par le sous-directeur, chef de la chancellerie,

T. DUBOIS.

Translation.

In verification of the signature of General Morin, director of the conservatory of arts and trades.
Paris, 13 February, 1873.
The minister of agriculture & commerce.
For the minister & by authorisation:
The member of the State council, secretary general,

V. ZUNRE.

The minister of foreign affairs certifies as genuine the signature of Mr. V. Zunre.
Paris, 13th February, 1873.
By authorization of the minister:
By the sub-director, chief of the chancellery,

T. DUBOIS.

CERTIFICATES TO DRAWINGS

Original.

Vu pour être annexé au brevet de quinze ans du 13 Juin 1846, 190 par le Sieur Covelet.
Paris, le 11 Août 1846.
Pour le ministre et par délégation:
Le maître des requêtes, directeur,

A. SENAC.

Pour copie conforme:
Le général de division, directeur du Conservatoire des Arts et Métiers,

MORIN.

PARIS, *le 2 Novembre* 1872.

Translation.

Verified to be annexed to the patent for 15 years, of date 13 June, 1845, obtained by Mr. Covelet.
Paris, August 11, 1846.
For the minister and by delegation:
The master of requests, director,

A. SENAC.

True copy:
The general of division, director of the Conservatory of Arts & Trades,

MORIN.

PARIS, *November* 2, 1872.

Original.

Vu pour être annexé au certificat d' addition pris le 7 Juin, 1847, par le Sieur Covlet.
Paris, Août, 30 1847.
Pour le ministre et par délégation:
Le maître des requêtes, directeur,

A. SENAC.

Pour copie conforme:
191 Le général de division, directeur du Conservatoire des Arts et Métiers,

MORIN.

Translation.

Verified to be annexed to the certificate of addition obtained by Mr. Covlet, June 7, 1847.
Paris, August 30, 1847.
For the minister & by delegation:
The master of requests, director,

A. SENAC.

A true copy:
The general of division, director of the Conservatory of Arts and Trades,

MORIN.

Original.

Vu pour être annexé au certificat d'addition pris le 7 Juin 1847, par le Sieur Covlet.
Pour le ministre & par délégation:
Le maître des requêtes, directeur,

A. SENAC.

Pour copie conforme:
Le général de division, directeur du Conservatoire des Arts et Métiers,
MORIN.

Translation.

Verified to be annexed to the certificate of addition secured by Mr. Covlet, June 7th, 1847.
For the minister & by delegation:
The master of requests, director,

A. SENAC.

192 True copy:
The general of division, director of the Conservatory of Arts & Trades,

MORIN.

Original.

Vu pour être annexé au certificat d'addition pris le 7 Juin 1847, par le Sieur Covlet.
Paris, le 30 Août 1847.
Pour le ministre & par délégation:
Le maître de requêtes, directeur,

A. SENAC.

Pour copie conforme:
Le général de division, directeur du Conservatoire des Arts & Métiers,
MORIN.

PARIS, *le* 18 *Février* 1873.

Translation.

Verified to be annexed to the certificate of addition obtained by Mr. Covlet June 7, 1847.
Paris, August 30, 1847.
For the minister & by delegation:
The minister of requests, director,
A. SENAC.

A true copy:
The general of division, director of the Conservatory of Arts & Trades,
MORIN.

PARIS, *February* 18, 1873.

Original.

Vu pour être annexé au certificat d'addition pris le 18 Juin 1847, par le Sieur Covlet.
Paris, le 30 Août 1847.
Pour le ministre et par délégation:
Le maître des requêtes, directeur,
A. SENAC.

Pour copie conforme:
Le général de division, directeur du Conservatoire des Arts & Métiers,
MORIN.

PARIS, *le* 12 *Février* 1873.

Translation.

Verified to be annexed to the certificate of addition obtained by Mr. Covlet June 18, 1847.
Paris, August 30, 1847.
For the minister & by delegation:
The master of requests, director,
A. SENAC.

True copy:
The general of division, director of the Conservatory of Arts & Trades,
MORIN.

PARIS, *February* 12*th*, 1873.

Original.

Vu pour être annexé au certificat d'addition pris le 19 Octobre 1848, par le Sieur Covlet.
Paris, le 29 Décembre 1848.
Pour le ministre & par délégation.
Le secrétaire général,
FLEURY.

Pour copie conforme:
Le général de division, directeur du Conservatoire des Arts & Métiers,
MORIN.

PARIS, *le* 13 *Février* 1873.

Translation.

Verified to be annexed to the certificate of addition obtained by Mr. Covlet October 19, 1848.

Paris, 29 December, 1848.
For the minister & by delegation:
The secretary general,

FLEURY.

A true copy:
The general of division, director of the Conservatory of Arts & Trades,
MORIN.

PARIS, 13 *February*, 1873.

DOCUMENT No. 18.

The President of the United States of America to all to whom these presents shall come greeting:

Know ye, that we having inspected the records and files of the circuit court of the United States for the southern district of New York, do find certain paper writings there remaining of record in the words and figures following, to wit:

SEAL CIR. CT. SO. D. OF N. Y.

195 U. S. circuit court, southern district of New York. In equity.

HOSEA BALL
vs.
THOMAS R. HARRIS.

SAME
vs.
C. A. FULLER.

SAME
vs.
J. T. WILSON.

SAME
vs.
G. B. BRINCKERHOFF ET AL.

To avoid unnecessary trouble and expense it is hereby stipulated and agreed that testimony taken in any of the above-entitled suits may be read and used in any and all of the others, in the same manner and with the same effect as if separately taken therein according to the rules and practice of the court.

Dated New York, February 28th, 1871.

GEO. GIFFORD,
Solicitor for Complainant.
M. M. LIVINGSTON,
Sol'r for Def'ts Brinckerhoff et al., Def't Wilson, and Def't Fuller.
W. D. PUTNEY,
Sol'r for Def't Harris.

Circuit court of the United States for the southern district of New York. In equity.

HOSEA BALL
vs.
THOMAS R. HARRIS.

SAME
vs.
C. A. FULLER.

SAME
vs.
J. T. WILSON.

SAME
vs.
G. B. BRINCKERHOFF ET AL.

Proof taken in the above causes on the part of the complainant,
196 under and pursuant to the 67th rule in equity before me, Joseph Gutman, jr., examiner.

NEW YORK, *Feb.* 28, 1871.

Present, Mr. Gifford, counsel for complainant, and Mr. Livingston, counsel for defendants Fuller, Wilson and Brinckerhoff et al., and Mr. Putney, counsel for defendant Harris.

Complainant's counsel offers in evidence a certified copy of letters patent reissued to Hosea Ball, dated June 14, 1870, numbered 426, with the certificate of extension attached thereto, all of which is marked Complainant's Exhibit A.

FRANCIS C. TREADWELL, jr., a witness of lawful age, produced upon the part of the complainant, having been by me first duly cautioned and sworn to testify the truth, the whole truth, and nothing but the truth, in the matters of controversy herein, and being examined by Mr. Gifford, counsel for complainant, deposes and says as follows:

Q. 1. What is your name, age, residence, and occupation?

A. My name is Francis C. Treadwell, jr. I am 47 years of age. I reside in the city of New York. I am a consulting engineer and solicitor of patents. For the past ten years and upwards I have been
197 frequently examined in patent causes in the United States circuit court as mechanical expert.

Q. 2. Have you read and do you understand the contents of the reissued letters patent to Hosea Ball, for a new and useful oven, dated June fourteenth, 1870, and number 4026, of which Exhibit A is a certified copy?

A. I have read and understand the contents of the letters patent referred to in the question.

Q. 3. Look at model, Complainant's Exhibit B, and state what it represents.

A. It is a correct copy of the model on file at the Patent Office of the patent to Hosea Ball, the re issue of which is referred to in the last question. It also correctly represents the oven described and shown in the specifications and drawings of said reissued letters patent to Hosea Ball.

(Complainant's counsel offers in evidence a certified copy of letters patent issued to Mary Ann Elizabeth McKensie, as the sole assignee of Duncan McKensie, dated May 1, 1860, and numbered 28,130, which is marked Complainant's Exhibit C.)

Q. 4. Have you read and do you understand the contents of
198 letters patent issued to Mary Ann Elizabeth McKensie, which is marked Complainant's Exhibit C?

A. I have examined and do understand the contents of the letters patent referred to in the question.

Q 5. Look at model Complainant's Exhibit D, and state what it represents.

A. It is a correct copy of the model, on file at the Patent Office, of the McKensie patent referred to in the last question, and correctly represents the oven described in said patent.

Q. 6. Have you at any time seen, and, if yea, when and where, ovens in use by the defendants?

A. I have a number of times, but more especially on October 26, 1870. I visited all their bakeries in this city.

Q. 7. How did the ovens in use by these defendants correspond with the model Complainant's Exhibit D?

A. So far as the construction and operation of the ovens are concerned, the defendants' ovens are substantially the same as model Exhibit D. The gear by which the reel was revolved in defendants' oven is not shown in model Exhibit D. The oven at Harris', in Beekman street, was, as well as I recollect, a ten-pan oven and had two furnaces communi-
199 cating with the baking chamber by flues, substantially as shown in model Exhibit D, and also by additional flues or passages leading from the furnace and combustion chamber in the rear thereof into the baking chamber through the floor thereof in a similar manner to the flues shown in model Exhibit D.

The ovens at Wilson's, in Cherry street, were sixteen-pan ovens. They had the same construction of furnaces and flues as Harris'. The oven at Brinckerhoff's, in Elizabeth and Grand streets, is a twelve-pan oven and similar in construction to the two last mentioned. The two ovens at Fuller's, in Twentieth street near Seventh avenue, were twelve-pan ovens, and constructed substantially in the same manner as the others before mentioned, with the exception that they were heated by one furnace each instead of two furnaces, as shown in the model Exhibit D, the flues and heat passages leading off from the single furnace and connecting with the baking chamber in substantially the same way as with the two furnaces. That I may not be misunderstood, I will state that in all these ovens there were, in addition to the passages shown in Ex-
200 hibit D as leading from the furnace and combustion chambers to the baking chamber, other flues or passages leading from the opposite sides of each of the furnaces and combustion chambers, and some openings or flues directly through the arch of the combustion chamber, into which the products of combustion pass after leaving the furnace, which latter openings communicated with the baking chamber.

Q. 8. State whether or not an oven like Complainant's Exhibit D includes any invention described and specified in the patent of which Complainant's Exhibit A is a copy as the invention of Hosea Ball, and explain or give your reasons for any answer you may make.

A. In my opinion an oven constructed like Complainant's Exhibit D contains the invention set forth in said Ball's reissued patent, referred to in the question and specified in the first claim thereof, because it contains one or more swinging holders, suspended from the arms or end plates of a rotating reel in combination with a furnace so arranged and connected that the products of combustion will pass into or through the chamber within which the bread holders move; or, in other words,
201 because said oven contains a combination of a baking chamber, of a rotating reel and swinging bread pans, suspended within the baking chamber, and of a furnace so arranged with relation to the baking chamber that the products of combustion from the furnace pass

from the furnace and its combustion chamber into the baking chamber and effect the baking of the bread placed upon the swinging pans by the direct action of the products of combustion, as distinguished from radiated heat, that is, heat radiated through a brick or metal medium.

In said Exhibit D the heat which passes from the furnace into the baking chamber may be attracted or drawn into the baking chamber by opening a damper which controls a flue in the top of the baking chamber, which gives a regular current through the oven, or it may be circulated through the oven as described in the McKensie patent by opening the lower damper at the back of the oven so that the heat will enter at the sides of the oven, pass upward and be drawn downward so that the current passes up through the back flue connected with the chim-
202 ney. In the Ball reissued patent an opening in the top of the baking chamber, controlled by a damper, connects with the chimney, so as to control the circulation of products of combustion through the oven, in the same way as the top damper in Exhibit D. I am aware that in the oven described and shown in the said Ball reissue there are side flues around the oven, through which the products of combustion pass into the baking chamber by openings in the sides of the same, but this I consider not substantially different from the mode of conducting the products of combustion in the baking chamber of Exhibit D, because in both cases the products of combustion pass from the furnace and combustion chamber through passages leading into the baking chamber; and, upon inspection of the two models, it will be perceived that the lower row of openings in the Ball oven are in the sides close to the bottom, while in the oven Exhibit D they are in the bottom close to the sides, which is a difference of the same character as that of opening a hot-air register into a room through the surbase near the floor,
203 and opening the register through the floor near the surbase, which in my opinion is not a material difference.

Q. 9. Please explain what is described and specified as the invention of McKensie in Exhibit C, in its relation to the Ball patent.

A. As I understand the invention of McKensie described in Exhibit C, it consists in certain improved arrangement of flues whereby the heat and products of combustion from the furnace are caused to circulate upwards along the sides of the baking chamber, when a downward draft takes place, and they descend to the centre of the oven to the central flue space, and escape out of the back flue of the oven. The patent states that "the heated air will thus be made to circulate and to rotate in the oven and diffuse its heat throughout the entire oven department in a uniform and rapid manner." The patent further states that, "instead of using heat by radiation, as in ovens of the present construction, I obtain a direct heat from the furnace, and thus economize time and fuel." In this respect the two ovens agree, be-
204 cause in both the McKensie and the Ball ovens the heat is obtained directly from the furnace, instead of by radiation through a radiating medium.

Q. 10. State whether or not the description in the Ball patent is sufficient to enable a person proficient in the art to make and construct and use the oven.

A. It is, taken in connection with the drawings, which form a part of said description.

Q. 11. Have you seen an operative oven of full size in use constructed exactly in conformity with the description in the Ball patent, and if yea, explain whether it operated well or not?

A. I have seen two such ovens. The first one I saw was in Baltimore at the bakery of James D. Mason; it had some twenty-two or twenty-three pans, I think, the reel being larger in diameter than the reels of ovens now in use in this city, but the pans were not so wide or so long. It had a shoot to discharge the bread, and was heated by products of combustion passing into the baking chamber from the furnace like the patent. The next one I saw at Isaac McGay's baking establish-
205 ment in Forsyth street, New York, which was also constructed in the same manner, but of smaller size and without the shoot. I examined them both carefully and examined the bread baked in them, and they worked well and baked the bread as well as the ordinary bakers' oven in use at that time, and much more regularly. I think that it was in the spring of 1857 that I saw both of these ovens, but it might have been in the summer or fall of that year. They were, as I un erstood, the first two ovens that Mr. Ball built under his patent.

ross-examination waived.

F. C. TREADWELL, JR.

Subscribed and sworn to before me this 28th February, 1871.

JOSEPH GUTMAN, JR.,
Examiner, &c.

NEW YORK, *June* 18, 1872—11.15 a. m.

Present, Mr. Witter for complainant, and Mr. Livingston for defendants.

WM. TITUS, a witness of lawful age, produced on the part of the complainant, having been first duly cautioned and sworn to testify the truth, the whole truth, and nothing but the truth, in the matter of controversy herein, being examined by Mr. Witter, counsel for com-
206 plainant, deposes and says as follows:

Q. 1. What is your name, age, residence, and occupation?

A. Wm. Titus; age 49; Lombardy st., Newark, N. J.; baker.

Q. 2. How long have you been engaged in this occupation?

A. 33 years.

Q. 3. State, if you please, what sort of ovens you used during the first part of your baking?

A. The old-fashioned tile oven.

Q. 4. State whether or not you made any change from that mode of baking, and if yea, what method did you adopt?

A. I did make a change to the reel oven.

Q. 5. Who put up for you this reel oven to which you refer?

A. Hosea Ball, the complainant.

Q. 6. How came you to have Mr. Ball build a reel oven for you?

A. I met him at Mr. McCollum's, and saw a model he had there of this oven.

Q. 7. About when did Mr. Ball put up this oven for you?

A. It is about 15 years ago.

Q. 8. In what manner was the heat admitted into the oven built for you by Mr. Ball at this time?

207 A. Well, there were holes in the sides of the oven.

Q. 9. Look at the model, Complainant's Exhibit B, and state whether that represents the manner in which the heat was admitted into the baking chamber of that oven?

A. I think that is the same model I first seen. I think the heat was admitted in the same manner, so far as my memory serves me.

Q. 10. Please state how that oven baked?

A. It baked very well.

Q. 11. About how many barrels of flour was that oven intended or calculated to bake?

A. About 15 barrels, 15 to 20 barrels.

Q. 12. State whether or not the oven baked successfully?

(Objected to as having been previously answered in response to question 10.)

A. It did.

Q. 13. State whether or not there were in that oven, as built by Mr. Ball, any holes in the bottom of the baking chamber for the admission of heat?

A. I don't know whether there were or not. I don't think there were.

Q. 14. How long did you use that oven as built by Mr. Ball?

A. About seven years without anything done to it.

208 Q. 15. How did it bake during these seven years; satisfactory or not?

A. Quite satisfactorily.

Q. 16. What was done to the oven at the end of these seven years of which you have spoken, if anything?

A. The furnace repaired.

Q. 17. By whom, and in what did these repairs consist?

A. By a mason, there in Newark, by the name of Dean; the idea was to make some little alteration.

Q. 18. What alteration?

A. To model after an oven Mr. Ball was using in Pearl street that time; after the furnace, I should say.

Q. 19. Please state what these alterations were?

A. I don't know as I can state what they were, not being into the furnace.

Q. 20. How did the oven work after these alterations had been made?

A. It worked about the same.

Q. 21. How did it bake butter crackers?

A. Very good.

Q. 22. When did it bake butter crackers best; before the alteration or after the alteration?

A. I think it did before.

Q. 23. Do you know whether it did or not; if yea, please state?

A. It did bake better before.

209 Q. 24. How long did you continue to use this oven so altered, and what did you next do in your baking business?

A. Up till within three years ago, I think, when Mr. McKensie made an alteration; I continued that till within three years ago.

Q. 25. How long did you use this oven after McKensie altered it, and what did you next do with reference to ovens?

A. I am using it yet.

Q. 26. For all purposes of baking?

A. No, sir.

Q. Why not?

A. I don't bake them right; it gives them too much bottom sometimes.

Q. 28. What oven do you use for baking articles which the McKensie oven does not bake right?

A. Tile oven—the old-fashioned tile oven.

Q. 29. State whether or not you have any arrangement with Mr. Ball regarding ovens. If yea, what?

A. He is building an oven for me now.

Q. 30. Which was the better oven for baking, the oven which Mr. Ball put up for you about 1857 or the old-fashioned tile oven?

A. The one Mr. Ball put up I gave the preference in all kinds of work.

Q. 31. Which consumed the most fuel?

A. With the same amount of work the old-fashioned oven consumed the most.

Q. 32. What sort of coal did you use in this oven as built by Mr. Ball?

210 A. Regular hard coal, Schuylkill, different kinds; anthracite coal.

Q. 33. State whether or not, in this oven built by Mr. Ball, it was your practice to keep the fire burning all day. How as to that?

A. Well, we pretty generally keep a fire up.

Q. 34. Did you always?

A. I have baked butter crackers the next day without building any fire very nicely; that is, the fore part of the day.

Q. 35. What was the difference, if any, in your firing the oven before the alteration by McKensie and after?

A. I don't know as there was any difference; fire up the same way.

Q. 36. Which took the most fire, if either, before or after the alteration by McKensie? I mean, to do the same amount of work?

A. I don't know that there was any difference in that regard.

Q. 37. In the oven, since it was altered by McKensie, do you or not have to keep a fire up all the time?

A. Yes, sir; I do.

Q. 38. Was that the case with the oven as built by Ball?

A. That was a general thing; we kept a fire all the time. I think it would bake more after the fire went out than it would now.

211 And on being cross-examined by Mr. M. M. LIVINGSTON, of counsel for defendants, the witness says:

X Q. 39. For what reason or purpose did you have Mr. McKensie make the alteration in your oven about three years ago, as you state?

A. My furnace wanted repairing, and Mr. McKensie was doing some work there in Newark for other parties, and he was talking with me about other business, and said he could make an oven of it—make an oven that would bake better.

X Q. 40. In what respect did the furnace want repairing?

A. The bricks were getting worn and knocked to pieces, flues getting stopped up, just like as though it wanted clearing out generally.

X Q. 41. Did you not see Mr. McKensie and endeavor to make arrangements with him with respect to the alteration of the oven, so as to get better bottom heat, as early as the year 1865?

A. I did see Mr. McKensie, and the idea was to get a better bottom.

X Q. 42. Which oven turned out the best baked bread, the old tile oven or the reel oven, as Ball built it?

A. I never tried the reel oven enough in loaf bread to know.

212 X Q. 43. If a man in your employ at the time the said reel oven was built by Ball, who used both that oven and your tile oven, has stated under oath that "he tried to bake loaf bread in said reel oven, and that such bread had no bottom and was all raw inside, that he could do nothing with the oven for such purpose," would you believe his statement to be correct?

(Objected to as indefinite and hypothetical.)

A. No, sir.

X Q. 44. Why not?

A. Because I know to the contrary.

X Q. 45. How do you know to the contrary?

A. Because I was there.

X Q. 46. How did your being there enable you to know, especially as you never tried the reel oven enough on loaf bread to know?

A. What I did try it baked it good.

X Q. 47. Do you mean to say that under such circumstances that you know with respect to the efficiency of the said reel oven for baking loaf bread better than the man in your employ, who actually tried the oven several times during the year 1858 and 1859, and tested it for baking loaf bread?

A. I know from the fact that we did not give it a trial, not exceeding twice, on account of the gearing of the oven not being strong
213 enough for bread, not intended for bread, or built for bread.

X Q. 48. You mean to say, then, do you, that you only tried the reel oven twice for baking loaf bread prior to its alteration by McKenzie?

A. Not to exceed that.

X Q. 49. Have you baked any loaf bread in it since it was altered by McKenzie?

A. No, sir.

X Q. 50. Why not?

A. Have not had occasion.

X Q. 51. Do I understand, then, that you are not engaged in the baking of loaf bread?

A. I do bake loaf bread.

X Q. 52. Do you bake it in the old tile oven?

A. Yes, sir.

X Q. 53. Do you consider that a better oven for baking loaf bread than a reel oven?

A. I am not prepared to judge, not baking loaf bread in a reel oven much.

X Q. 54. Do you mean to be understood as saying that the oven, after being altered by McKenzie, baked better or not so good as before being altered at all; which do you mean to say?

A. It baked better before it was altered at all; some kinds I have abandoned entirely, baking in the oven as it is now.

X Q. 55. You mean to say, then, that it was considerably better than after being altered?

A. When it was first built it was considered to be better.

X Q. 56. Such being the case, why have you not had it altered
214 back again to the way it was when it was first built?

A. I have been holding on to build a new one entirely—getting ready to build a new one.

X Q. 57. How much do you suppose it would cost to alter it back?

A. I don't know.

X Q. 58. You have never, then, taken the trouble to ascertain?

A. No, sir.

X Q. 59. Have you or not paid Mr. McKenzie in full as you agreed for making the alteration in your oven, about three years ago?

(Objected to as out of the line of cross examination and as immaterial.)

A. Yes, sir.

X Q. 60. Have you not visited bakeries and found the McKenzie reel oven successfully in use for baking all kinds of crackers and bread?

A. No, sir.

X Q. 61. Do you mean by that to say that you have not visited bakeries, or do you mean to say that McKenzie' reel oven is not successfully in use for baking all kinds of crackers and bread?

A. I mean to say that I have not visited bakeries to ascertain that.

X Q. 62. Do you know of any reel oven of the same construction as yours was when first built by Ball, in use anywhere at the present day?

A. I do not.

215 X Q. 63. Do you not own the right for the city of Newark, under the Ball oven patent upon which this suit is brought?

A. Yes, sir; I do.

X Q. 64. Is it not a fact that Mr. McKenzie claims that you have not paid him in full as you agreed for making the alterations in your oven about (3) three years ago?

(Same objection as to X Q. 59.)

A. He claims I have not, I believe.

And being re-examined by Mr. WITTER, the witness deposes and says as follows:

Re-d. Q. 65. (De bene esse.) State the circumstances regarding your agreement with and payment of McKenzie?

A. He agreed to let his men make the alteration at so much a day. If he made the oven better, he said I should give him one hundred dollars. I paid his men for their work the full amount of their bill. I couldn't see a betterment in the oven, and so I never paid him the one hundred dollars.

WM. TITUS.

Subscribed and sworn to before me, this 18th day of June, 1872.

JOSEPH GUTMAN, JR.,
Examiner, &c.

CHARLES H. HOYT, a witness of lawful age, produced on the
216 part of the complainant, having been by me first duly cautioned and sworn to tell the truth, the whole truth, and nothing but the truth, in the matter of the controversy herein, and being examined by Mr. WITTER, counsel for defendants, deposes and says as follows:

Q. 1. What is your name, age, residence, and occupation?

A. My name is Charles H. Hoyt; I am 48 years old; I reside at 234 Twelfth street, Brooklyn, and am a cracker baker.

Q. 2. Where are you employed?

A. At McGay & Cos., 219 Forsyth street.

Q. 3. State whether or not they use any reel ovens there; if yea, how many?

A. They use one.

Q. 4. How does it work?

A. It don't work good.

Q. 5. Please state in what particulars it don't work good.

A. It don't bake crackers even.

Q. 6. What articles do you bake in it?

A. We bake all kinds of crackers, snaps, lemon-crackers; all the kinds that we bake, we bake in that oven; we don't use any other oven now.

Q. 7. You say it don't bake crackers even; does it bake anything else even?

A. No; not anything that we bake in it.

Q. 8. What do you mean by saying that it don't bake even?

217 A. The crackers are not baked all alike on the same pan.

Q. 9. Describe the effect of the baking.

A. Some of them have got more bottom than others—browner bottom.

Q. 10. State whether or not they get burned, any of them, on the bottom or elsewhere.

A. They do, some of them.

Q. 11. State whether or not in this oven the products of combustion, smoke, &c., enter the baking-chamber.

A. The ashes enter.

Q. 12. How as to the flame?

A. The flame enters when we have on a certain amount of fire; a heavy fire throws the flame up through.

CHARLES H. HOYT.

Subscribed and sworn to before me this 18th day of June, 1872.

JOSEPH GUTMAN, JR.,
Examiner, &c.

Further examination of witnesses adjourned to Thursday, June 20, 1872, at 11 a. m.

NEW YORK, *June* 20, 1872—11 a. m.

Present, counsel as before.

JEREMIAH MANNING, a witness of lawful age, produced on the part of the complainant, having been by me first duly cautioned and
218 sworn to testify the truth, the whole truth, and nothing but the truth, in the matter of controversy herein, and being examined by Mr. Witter, counsel for complainant, deposes and says as follows:

Q. 1. What is your name, age, residence, and occupation?

A. My name is Jeremiah Manning; I am 32 years of age; I reside at Harrison Co, New Jersey; I am a baker.

Q. 2. How long have you followed that occupation?

A. Nineteen years.

Q. 3. Where?

A. At William Titus', 19 Lombardy st., Newark, N. J. That number is now changed to 30.

Q. 4. What position do you occupy at this bakery, and how long have you occupied that position?

A. Foreman of the cracker department and engineer, and I have that situation for about seventeen years.

Q. 5. What sort of ovens were used in that bakery when you were first employed there?

A. The tile oven.

Q. 6. State whether or not any change was made to a different sort of oven; and, if yea, what?

A. It was changed to one of Ball's reel ovens; I don't mean that the tile oven was changed to a Ball oven, but that a Ball oven was built.

Q. 7. Why do you call this oven a Ball oven?

219 A. I call it a Ball oven because that is the man's name that put it up—that built it.

Q. 8. What is his first name?

A. Hosea Ball, the gentleman here present.

Q. 9. About what year was it that this Ball oven was built?

Q. About fifteen or sixteen years ago.

Q. 10. What sort of oven was this? Give a little description of it.

A. It was an oven of which the furnace was down stairs, and had an

arch over the furnace all the way across, admitted the heat in the oven at the rear and each side by holes.

Q. 11. How did this oven work?

A. It worked very well.

Q. 12. How as compared with the old tile ovens?

A. It worked better than the old tile ovens.

Q. 13. Which burned the greater amount of coal for the same amount of work?

A. The tile oven.

Q. 14. What kind of coal did you use in the Ball oven?

A. Hard coal; Lehigh and Scranton coal.

Q. 15. Look at the model, marked Complainant's Exhibit B, and state whether it represents that Ball oven, so far as the location of the holes for the admission of heat to the baking-chamber is concerned.

220 A. It is the same, only the holes did not run up quite so high as they do in this model.

Q. 16. State whether you used in this oven any other coal than hard coal.

A. No, sir.

Q. 17. How long did you use this oven, as built by Mr. Ball, without alteration?

A. About four or five years.

Q. 18. State whether or not it worked satisfactorily during all this time?

A. It did, satisfactorily, all the time.

Q. 19. What was done, if anything, with this oven at the end of the time you have mentioned?

A. It was fixed then as Ball's oven was in Pearl street, as near as I understood it was then. I never saw the oven in Pearl street.

Q. 20. State what was done to it by way of fixing, as you have said.

A. The furnace was torn out. The arch was taken out so that the fire went over into a chamber before going into the baking-chamber, and passed along through other chambers before going into the oven.

Q. 21. Where in this oven, as thus fixed, were the holes located for the admission of heat into the oven or baking-chamber?

A. The heat came up through holes in the bottom of the oven.

221 Q. 22. How as to the sides?

A. The sides were about the same as they were before, except that they were made smaller. A brick was put into them.

Q. 23. Which worked better—the oven as thus first altered, or the oven as built by Mr. Ball?

A. The oven as built by Mr. Ball at first. If there was any difference, it was best at first.

Q. 24. In what particular?

A. It baked better, as we had a better heat first off.

Q. 25. How long was the oven used in this condition?

A. About four years, I should judge.

Q. 26. What was then done?

A. It was altered to McKenzie's style.

Q. 27. Who altered it?

A. I think it was Mr. McKenzie's men; McKenzie was not there all the time.

Q. 28. Were the alterations made under his direction?

A. I aint sure of that. Mr. McKenzie's men came there and did it.

Mr. McKenzie was not there all the time. They seemed to take supervision of it themselves.

Q. 29. How did the oven work after this alteration by McKenzie?

A. It worked very well with a quick fire in it.

Q. 30. What do you mean by a quick fire?

222 A. A fire kept cleaned out, so that the fire could go right into the oven, so that the draft would go through it all the time and drive the heat in.

Q. 31. How as to the oven in this respect before altered by McKenzie?

A. We did not need such a quick fire; once having started a fire we had a solid heat.

Q. 32. Which was the better for baking?

A. Solid heat is best for baking.

Q. 33. Why?

A. Because you get the heat into it gradually. A flash heat drove it in quick.

Q. 34. What objections were there to this flash heat, as you term it?

A. It colored the crackers too much; the heat came right on the crackers from the bottom.

Q. 35. State whether or not you were troubled with flash heat, as you call it, in the oven before it was altered by McKenzie.

A. We were not.

Q. 36. Which burned the most coal, the oven before or after alteration made by McKenzie?

A. After.

Q. 37. In what part of the oven was the heat admitted to the baking chamber after the alteration by McKenzie?

A. From the bottom.

Q. 38. State whether or not you are now using that oven as altered by McKenzie.

A. We are.

223 Q. 39. For all purposes?

A. For all our machine work.

Q. 40. Do you bake hand-made crackers in that oven?

A. We do not now.

Q. 41. Why not?

A. It did not bake them good; it was too quick for them.

Q. 42. Why, then, do you use McKenzie's oven now?

A. We have no other to bake crackers in now.

Q. 43. How long have you abandoned baking hand-made crackers in that oven?

A. Over a year now.

Q. 44. State whether or not you intend to continue the use of this McKenzie oven.

A. We do not, I believe.

Q. 45. What is the intention?

(Objected to as incompetent.)

A. The intention is to build a new one.

Q. 46. Whose?

A. Hosea Ball's.

Q. 47. How do you know that?

A. We have commenced to build it now.

Q. 48. When did this oven bake the best—before the alteration by McKenzie or after such alteration?

(Objected to as having been already answered in reply to Q. 29.)

A. Before.

And being cross-examined by Mr. LIVINGSTON, he says:

X Q. 49. In what particular did the oven bake better before alteration by McKenzie than after?

224 A. We had a solid heat on it and it baked slow.

X Q. 50. You then could not turn out as much work before alteration as you could after?

A. Yes, we could.

X Q. 51. Please explain if, as you say, the oven baked slower before alteration than after.

A. By baking quicker it gets the fire right away; by baking slower it gets a steady heat all the way around.

X Q. 52. Did you get a solid heat in the tile oven?

A. We did.

X Q. 53. What kind of fuel did you use in the tile oven?

A. Hard coal.

X Q. 54. Did you continue the use of the tile oven after the oven was built by Ball?

A. No; not for crackers.

X Q. 55. More particularly, what kind of stuff did you bake in the tile oven?

A. All kinds.

X Q. 56. Who directed or superintended the alteration first made in the Ball oven, to which you have referred?

A. William Titus directed it, and a man by the name of Dean did the work.

X Q. 57. What had Mr. Titus seen, or what induced him to have the alteration made, if you know?

A. What induced him was that the furnaces burned out, and he had to have something done.

X Q. 58. Do you know what induced him to have it altered like
225 the oven at Mr. Ball's, in Pearl street, New York, rather than simply repairing the furnace, so as to put it in its former good condition?

A. I think he thought probably we could turn out work faster.

X Q. 59. Do you know who led him to entertain such supposition?

A. I do not.

X Q. 60. Did you bake any loaf bread in the Ball oven before any alteration?

A. I did.

X Q. 61. With what result?

A. It was not built heavy enough for bread.

X Q. 62. How much loaf bread did you bake, and how well was it baked?

A. I do not know how many loaves were baked. We put one or two nights into it; probably a week. I don't remember exactly how long. I believe the boss said it was baked very good.

X Q. 63. Who do you mean by the boss?

A. Mr. William Titus.

X Q. 64. Do you know whether or not a man named Henry Roth was foreman of the bread shop, say 1857 and 1858?

A. He was, about that time.

X Q. 65. Was it Mr. Roth's business, as such foreman, to look after the bread baked and to see that it was baked right?

A. It was.

226 JEREMIAH MANNING.

Subscribed and sworn to before me this 20th June, 1872.

JOSEPH GUTMAN, JR.,
Examiner, &c.

Adjourned to June 22, 1872, at 12 m.

NEW YORK, *June* 22, 1872—12 m.

Present, counsel as before.

Examination adjourned to June 25, 1872, at 11 a. m.

JOSEPH GUTMAN, JR.,
Examiner, &c.

NEW YORK, *June* 25, 1872, at 11 a. m.

Present, counsel as before.

ELI P. WASTE, a witness of lawful age, produced upon the part of the complainant, having been by me first duly cautioned and sworn to testify the truth, the whole truth, and nothing but the truth, in the matter of controversy herein, and being examined by Mr. Witter, counsel for complainant, deposes and says as follows:

Q. 1. What is your name, age, residence, and occupation?

A. Eli P. Waste. I am 52 years of age. I reside at No. 129 Devoe street, Brooklyn, E. D.; am baker.

Q. 2. Where is your place of business?

A. No. 219 Forsyth street.

Q. 2. Are you the proprietor?

227 A. One of the firm; the firm's name is McGay & Co.

Q. 4. What is the name of your foreman?

A. Charles Hoyt, who has been examined in this case.

Q. 5. State whether or not he is, in your opinion, a good baker.

A. He has always been considered so.

Q. 6. What ovens do you use in your business?

A. We use the reel oven, and we have the old fashioned tile oven.

Q. 7. Have you more than one reel oven?

A. No, sir.

Q. 8. How does it work?

A. On some stuff it works very well, and on some it does not.

Q. 9. In what respect or respects does it not work well?

A. On stuff that require considerable heat we find that some parts will scorch on the bottom before it will bake on others on the same pan.

Q. 10. What name do you give to that imperfection in baking?

A. Irregular—not an even heat.

Q. 11. State whether or not the heat comes through the bottom of this oven which you use.

A. It does.

Q. 12. State whether or not the heat carries a portion of the ashes and flame with it into the oven proper or baking chamber?

A. It does.

228 Q. 13. Please state how long you have used this oven and found it thus dissatisfactory in the respect mentioned?

A. I have been connected with the firm since a year ago first of April, and I found it so all that time, that is, since a year ago last April. The foreman that was there had run the oven for several years at the time I went there. He told me that he found this same difficulty with the baking, and had laid bricks over a portion of the apertures to remedy them.

(So much of the preceding answer as relates to what witness was told is objected to as incompetent.)

Q. 14. What was this foreman's name to whom you refer?

A. Philip Kennedy.

Cross-examination waived.

E. P. WASTE.

Subscribed and sworn to before me this 25th day of June, 1872.

JOSEPH GUTMAN, JR.,
Examiner, &c.

WALTER K. MARVIN, a witness of lawful age, produced on the part of the complainant, having been by me first duly cautioned and sworn to testify the truth, the whole truth, and nothing but the truth in the matter of controversy herein, and being examined by Mr. WITTER, counsel for complainant, deposes and says, as follows:

229 Q. 1. What is your name, age, residence, and occupation?

A. Walter K. Marvin. I am 48 years of age. I reside at 4 East Forty-first street, and am a safe manufacturer.

Q. 2. Are you engaged in any other enterprise? If yea, what?

A. Yes, sir; in the manufacture of crackers.

Q. 3. Where?

A. Pittsburg, Penn.

Q. 4. What sort of ovens do you use there in that business?

A. We use what is called the Ball patent oven.

Q. 5. Mention some of its characteristic features, if you please.

A. It is a reel oven, and has perforated sides and backs.

Q. 6. How many of these Ball patent ovens are you using there?

A. Two.

Q. 7. Have they, or not, perforated bottoms for the admission of heat to the baking-chamber?

A. They have not.

Q. 8. How long have you been using these two ovens there?

A. One of them has been used for about two years and the other about five.

Q. 9. State, if you please, how they have worked—what satisfaction they have given.

A. They have given very good satisfaction.

230 Q. 10. Have you ever been concerned in the building or use of any other oven of this same kind? If yea, when and where? as near as you can state.

A. I was engaged in building one in Pittsburg, Penn., before these two, about ten years ago, and one in Detroit about nine years, shortly subsequent to the other.

Q. 11. State whether or not these last two ovens were built under the same patent as the first two.

A. Yes, sir; they were.

Q. 12. What Ball do you mean when you say Ball's patent oven?

A. Mr. Hosea Ball—here present.

Q. 13. Did you use both, or either of these two ovens last mentioned yourself? If yea, for how long?

A. They were both used by my employés.

Q. 14. State how they worked.

They worked well.

Q. 15. State whether you ever found any fault with the working in actual use of either of these four ovens you have mentioned.

A. I have not. I never had any occasion to find fault.

Q. 16. How did they work, as compared with the old tile oven?

A. They worked much more rapidly, but whether they do it so very much better I am not able to say.

231 Q. 17. How as to economy of fuel and labor?

A. I don't know; but I should think that there was one-half saved at least.

Q. 18. What amount of business are you doing with these ovens in Pittsburg now, approximately?

A. Well, sir, something over two hundred thousand dollars a year.

Q. 19. What became of the oven that you built in Detroit?

A. I sold it.

Q. 20. To whom?

A. To John and Alexander W. Copland.

And being cross-examined by Mr. LIVINGSTON, he deposes and says:

X Q. 21. Were there any alterations made in any of these ovens to which you have referred after being first built?

A. No, sir; none that I know of.

X Q. 22. When did you last examine the said three ovens in Pittsburg to ascertain as to their construction?

A. Well, sir, I never examined one for that purpose. I built one, and superintended the building of it, and saw every brick put in it.

X Q. 23. Which of the three was this one?

A. That was the first one at Detroit; stood personally over them.

X Q. 24. What has become of this first oven, the building of which you superintended at Pittsburg?

232 A. That was torn down; we moved our location.

X Q. 25. When did you sell to the Messrs. Copland the oven in Detroit?

A. In 1864 or 1865; I don't remember which.

X Q. 26. Were either of the two ovens you say you are now using in Pittsburg ever rebuilt?

A. Never; they are now just as they were when they were put up.

X Q. 27. Were these two ovens built with a solid arch over the furnace or with an arch with openings in it?

A. They were built by a mason in Pittsburg, who had never built an oven before, who only had ours as a pattern, and we told him to build them exactly like it.

X Q. 28. Were there not openings through the arch of the furnace so as to establish communication between the furnace and the baking-chamber?

A. Not that I know of.

X Q. 29. Did you ever examine the said two ovens to ascertain as to this point?

A. I never have been in them. I have only seen them from the fire-floor, and I think I should have seen any openings there if there had been any.

X Q. 30. Who built these last two ovens for you?

233 A. My nephew, Sylvester S. Marvin. He superintended the building; we are together in business, and he superintended.

X Q. 31. Do you know the name of the party who superintended or acted as foreman of the mason work?

A. No, sir; I don't know it.

X Q. 32. Were you not troubled to get bottom heat in the first oven built in Pittsburg?

A. Never, to my knowledge.

X Q. 33. What interest have you in the Ball patent, to which you have referred, the one on which this suit is brought?

A. We purchased the right for the city of Pittsburg, or rather for Alleghany County.

X Q. 34. It is, then, for your interest, is it not, to have the complainants' patents herein sustained?

A. Yes, sir; I suppose it is.

X Q. 35. About how much of your time have you spent in Pittsburg in connection with the bakery there during the last ten years?

A. Well, in that time probably about six months.

X Q. 36. About how long did it take to build and complete the first oven there at Pittsburg?

A. I should think about six weeks.

X Q. 37. Could not any of the several ovens to which you have
234 referred have been altered from the way they were first built and you not know it?

A. I suppose they could be, but I don't think it likely they would be.

X Q. 38. Are there any other reel ovens besides the two you have now in use, in Alleghany County, Penn.?

A. Not to my positive knowledge, but I heard there was one.

W. K. MARVIN.

Subscribed and sworn to before me this 25th day of June, 1872.

JOSEPH GUTMAN, JR.,
Examiner, &c.

ALEXANDER W. COPLAND, a witness of lawful age, produced on the part of the complainant, having been by me first duly cautioned and sworn to testify the truth, the whole truth, and nothing but the truth, in the matter of controversy herein, and being examined by Mr. WITTER, counsel for complainant, deposes and says:

Q. 1. What is your name, age, residence and occupation, and where and how long have you followed it?

A. My name is Alexander W. Copland. I am forty-three years of age. I reside at Detroit, Michigan. My occupation is a baker. I have followed this occupation in Detroit about twenty years.

235 Q. 2. Are you the Alexander W. Copland referred to in the testimony of W. K. Marvin?

A. Yes, sir.

Q. 3. Are you in business alone or with another or other persons?

A. I am not alone just now. I took a partner with me about the 6th of this month.

Q. 4. How were you engaged immediately before that?

A. Alone, in my main business.

Q. 5. When did you commence this business alone?

A. About four years ago I ceased being in business with my brother, I. Copland.

Q. 6. What sort of oven or ovens were used by you and your brother when you were in business together?

A. Ball's patent reel oven.

Q. 7. Of whom did you buy it?

A. Mr. W. K. Marvin.

Q. 8. How long did you and your brother together use it?

A. About three years.
Q. 9. State how it worked.
A. Very well.
Q. 10. State whether you found any fault with it in actual use.
A. Not any.
Q. 11. What has become of it?
A. It is now run, sir, in Detroit, by my brother, to whom I sold out.

236 Q. 12. State whether or not you have ever seen any holes in the bottom of that oven, for the admission of it into the baking chamber.
A. I have not.
Q. 13. Would you have been likely to see them if there had been any there?
A. Yes, sir.
Q. 14. State whether or not you have seen holes in the sides of that oven for the admission of heat into the baking chamber.
A. I have.
Q. 15. Which oven do you consider preferable in point of economy of fuel and labor and in the quality of the work—this Ball patent oven which you have used, or the old tile oven?
A. Very much in favor of the Ball patent oven.
Q. 16. Have you been *appointed* with the use of this oven since you sold out to your brother? If yea, state whether it has continued to work successfully.
A. It has worked successfully as far as my knowledge goes.
Q. 17. How does your brother's business compare with or affect yours?
A. Very materially; the principal competitor I have in Detroit.

And being cross-examined by Mr. LIVINGSTON, he deposes and says:

237 X Q. 18. After selling out to your brother your interest in the firm of which you and your brothers were partners, did you not have an oven constructed for your own use, with openings through the arch of the furnace establishing direct communication between the furnace and baking-chamber, and without openings or holes in the side walls and end wall of the baking-chamber?
A. I had an oven constructed with no holes in the rear, but I consider, as this oven is built, they are partially in the side and partially in the furnace.
X Q. 19. Were there, or not, any side chamber or chambers surrounding the baking-chamber?
A. No, sir.
X Q. 20. Do not the flues or passages for admitting the products of combustion into the baking-chamber come up through the arch of the furnace or bottom of the baking-chamber?
A. They do, but more particularly towards the side walls. I mean that they tend that way.
X Q. 21. You mean, do you, that they do not enter through the side walls, but through the bottom or arch of the oven, near the side walls?
A. Yes, sir; and also at the other side, on both sides of the arch.
238 X Q. 22. Who built the oven for you?
A. Mr. McKenzie; Duncan McKenzie, here present.
X Q. 23. What did you pay Mr. McKenzie for the right to use one oven with the heat thus admitted, exclusive of the cost of building?
(Objected to as irrelevant and immaterial.)

A. I am not positive, but I think it was $500 or over.

X Q. 24. Do you know whether or not Mr. McKenzie has built two of his patented reel ovens for your brother?

A. So I understand from Mr. McKenzie.

(Objected to as hearsay.)

X Q. 25. Does the oven which Mr. McKenzie built for you contain a revolving reel with bread-holders?

A. It has hanging pans.

X Q. 26. What interest have you in the extended term of the Ball patent, on which this suit is brought?

A. I purchased the right for the county of Wayne, in the State of Michigan, for the extended term of Mr. Ball.

On being re-examined by Mr. WITTER, he deposes and says:

Re D. Q. 27. Did you come to New York from Detroit for the purpose of giving this testimony?

A. I had no such intention when leaving.

239 A. W. COPLAND.

Subscribed and sworn to before me this 25th day of June, 1872.

JOSEPH GUTMAN, JR.,
Examiner, &c.

Further examination of witnesses adjourned to June 27, 1872, at 11 a. m.

NEW YORK, *June* 27—11 a. m.

Present, counsel as before.

ANDREW A. BOYD, a witness of lawful age, produced on the part of the complainant, having been by me first duly cautioned and sworn to testify the truth, the whole truth, and nothing but the truth in the matter of controversy herein, and being examined by Mr. WITTER, of counsel complainant, deposes and says as follows:

Q. 1. What is your name, age, residence, and occupation?

A. My name is Andrew A. Boyd; I am forty-seven years of age; I reside at No. 18 Grove street, New York; I am a baker.

Q. 2. How long have you been engaged in this occupation?

A. I have been in the business about 28 years; a little over 6 years for myself.

240 Q. 3. What sort of ovens were you familiar with in the early part of your connection with the business?

A. The tile oven.

Q. 4. With what oven were you next acquainted?

A. With Ball patent reel oven.

Q. 5. Where and about when did you become acquainted with that oven?

A. At No. 219 Fulton street, New York, about fifteen years ago. I don't recollect the year.

Q. 6. Under whose direction or superintendence was that oven built?

A. By Hosea Ball, here present.

Q. 7. Whose bakery was it at 219 Fulton street, where you became acquainted with this Ball oven?

A. I think Peter B. and R. G. Anderson had it at that time.

Q. 8. Was this oven or not what is known as a reel oven?

A. It was called so—a reel oven.

Q. 9. Through what part or parts of the oven was the heat admitted to the baking-chamber?

A. Through the side walls, as far as I could see.

Q. 10. About how long were you familiar with that oven in use?

A. I cannot say exactly; some three or four years.

Q. 11. State how that oven worked during this period—whether
241 satisfactory or otherwise.

A. It seems to give very good satisfaction.

Q. 12. In what respects, if any, was it superior to the old tile oven of which you have spoken?

A. Only in baking more quantity with less hands. That was the only difference I saw.

Q. 13. How as to quality of baking?

A. I don't know. There would be some little argument on that. Sometimes it would bake just as good as the old-fashioned oven; at other times not.

Q. 14. Which burned the most fuel for the same amount of work?

A. That I don't know. I never had anything to do with that.

Q. 15. You say that sometimes it worked as well as the old-fashioned oven and sometimes not. Was that due to the different abilities of the baker, or how otherwise?

A. I couldn't say that—whether it was the oven's fault or the baker's fault. It might not have had the right heat.

Q. 16. Did some foremen bake better than others? How as to that? (Objected to as immaterial.)

A. Yes, sir.

Q. 17. How much should you think depends upon the skill of the baker in running one of these ovens?

(Objected to as incompetent.)

A. Well, I think considerable.

242 Q. 18. At the time this oven was erected, did you have any understanding as to how many barrels of flour it was put up to bake? If yea, about what number of barrels?

(Objection continued.)

A. About 20 barrels.

Q. 19. Was it able to accomplish this duty satisfactorily?

A. It did.

Q. 20. What were your particular duties at the time?

A. I was bookkeeper, shipping-clerk—in fact, I made myself generally useful at the bakery.

And being cross-examined by Mr. LIVINGSTON, he deposes and says:

X Q. 21. Can you state how the dampers were arranged in the Ball reel oven to which you have referred?

A. No, sir.

X Q. 22. Why not?

A. Because I never saw them.

X Q. 23. From whom did you learn that the reel oven you have referred to baked at the rate of 20 barrels?

A. I understood it from Mr. Anderson, the proprietor; about 20 barrels.

X Q. 24. From which Mr. Anderson?

A. Peter B. Anderson.

A. A. BOYD.

Subscribed and sworn to before me this 27th June, 1872.

JOSEPH GUTMAN, JR.,
Examiner, &c.

243 SAMUEL T. PAYSON, a witness of lawful age, produced on the part of the complainant, having been by me first duly cautioned and sworn to testify the truth, the whole truth, and nothing but the truth in the matter of controversy herein, and being examined by Mr. WITTER, counsel for complainant, deposes and says as follows:

Q. 1. What is your name, age, residence, and occupation?

A. My name is Samuel T. Payson; I am 55 years of age; I reside at Brookly', N. Y.; I am a baker.

Q. 2. Did you ever use a reel oven? If yea, when first?

A. I have used a reel oven. I think it was in 1863 that I used the first reel oven. It might have been in 1864, but I have the impression that it was in 1863.

Q. 3. How long did you use it?

A. Ever since. I am using a reel oven now.

Q. 4. How long did you use that first oven to which you refer, without alteration?

A. Up to March, 1871.

Q. 5. How was the heat admitted to the baking-chamber—that is, through what part of the oven?

A. Through perforated side walls.

Q. 6. Did you use that oven during this time successfully in your business?

A. Yes, sir.

244 And being cross-examined by Mr. LIVINGSTON, he deposes and says:

X Q. 7. Who built the reel oven to which you have referred?

A. A man by the name of Brown, under Knapp's patent.

X Q. 8. Were you using tile ovens in your bakery at the same time that you were using said reel oven?

A. We had one tile oven that we used for cake and bread, but not for crackers.

X Q. 9. You used the reel oven, then, for baking crackers?

A. We did. That was our principal business.

And being re-examined by Mr. WITTER, he says:

Re D. Q. 10. How do you know that that oven was built under Knapp's patent?

A. It had his name on as patentee, on the casting, and when I bought it the bill was made out as Knapp's patent. That is all I had to judge from.

Re D. Q. 11. Then you have no knowledge of what the patent itself was for?

A. No; the patent was on the furnaces; a patent oven. There was nothing said about the reel being patented.

Re D. Q. 12. What right did you buy of Mr. Knapp in connection with that oven?

A. I bought the right of using his patent oven—one oven in the city of New York. It designated 30 Cortland street at the time.

245 Re D. Q. 13. Do you know the date of the patent?

A. I don't recollect now. It has just come to my mind that the paper read like this. I had a bill of sale of all the right, title, and interest he would have had to that oven, provided the bill of sale had not been executed.

SAM'L T. PAYSON.

Subscribed and sworn to before me this 27th day of June, 1872.
JOSEPH GUTMAN, JR.,
Examiner, &c.

Examination adjourned to June 29th, 1872, at 1 p. m.
JOSEPH GUTMAN, JR.,
Examiner, &c.

NEW YORK, *June 29th*, 1872—1 p. m.

Present, counsel as before.
Examination adjourned to July 1st, 1872, at 11 a. m.
JOSEPH GUTMAN, JR.,
Examiner, &c.

NEW YORK, *July 1st*, 1872—11 a. m.

Present, counsel as before.
Examination adjourned to July 9th, 1872, at 11 a. m.
JOSEPH JUTMAN, JR.

N. Y., *July 9th*, 1872—11 a. m.

Present, counsel as before.

JAMES D. MASON, a witness of lawful age, produced on the part of the complainant, having been by me first duly cautioned and
246 sworn to testify the truth, the whole truth, and nothing but the truth, in the matter of controversy herein, and being examined by Mr. WITTER, deposes and says as follows:

Q. 1. What is your name, age, residence, and occupation?
A. My name is James D. Mason; I am 47 years old; I reside at Baltimore, Maryland; I am a baker.
Q. 2. How long have you been engaged in that business?
A. Twenty-six years.
Q. 3. What sort of ovens did you first use in your business?
A. The old fashioned wood oven.
Q. 4. What next?
A. The same sort of oven, but for burning coal.
Q. 5. What kind of coal?
A. Hard coal.
Q. 6. What name was the oven usually known by?
A. I never knew that it had any name.
Q. 7. What sort of oven did you use next?
A. The long, endless chain patent oven.
Q. 8. What next?
A. The next was Ball's reel oven.
Q. 9. Did you ever use what is often called the old fashioned tile oven?
A. We did; it was the wood oven that I spoke of.
Q. 10. How came you into possession of the Ball reel oven of which you have spoken?
A. I had had some trouble with the endless chain oven and sent for Mr. Ball to make some alterations; while making the alterations he produced a small tin box, with a reel inside of it, showing me the
247 working of said reel; I then told him to go to work and put me up an oven like it.
Q. 11. Did he do so; if yea, about when was it completed?
A. He did; it was completed about fifteen or sixteen years ago.

Q. 12. Through what parts of this oven was the heat admitted to the baking chamber?

A. Through apertures or openings in the side walls and rear walls.

Q. 13. How long did you use the oven?

A. We have used it ever since.

Q. 14. State whether or not it was worked during all this time successfully.

A. It has worked successfully.

Q. 15. Has this first oven ever been altered by Mr. McKenzie?

A. It has not, sir.

Q. 16. State how this oven worked, as compared with any oven which you had previously used.

A. I considered it the best that I ever saw or heard of.

Q. 17. State whether or not any other oven like this one was put up for you; if yea, when and by whom?

A. I had a second oven built by Mr. Ball; I don't recollect the date.

Q. 18. State whether or not that oven was ever altered by Mr. McKenzie.

A. It was.

Q. 19. Give your reasons for having such alterations made.

248 A. When Mr. Ball first built the oven I told him I did not want him to build it as high as the first oven; consequently he had to dig down, and afterwards, when the oven was built, I found that in consequence of digging so much lower than for the other oven I was troubled with the water coming in, which caused so much steam that the oven did not work satisfactorily, and, by Mr. McKenzie's alterations, the furnace was raised clear of the water. Mr. McKenzie also brought the heat directly into the oven through the bottom.

Q. 20. You then used this oven thus altered by McKenzie, did you?

A. I did, sir.

Q. 21. Which worked the better, the oven so altered or the first one built by Mr. Ball, and which you have used ever since?

A. The first oven built by Mr. Ball baked the bread more uniformly than the second oven.

Q. 22. State what satisfaction that first Ball oven has given your workmen during the period in which you have had it in use.

A. They always gave it a decided preference over the other, that is, the oven altered by McKenzie; I mean after the alteration.

Q. 23. What kind of coal did you burn in the furnaces of the Ball oven?

249 A. I always used the hardest anthracite I could get.

Q. 24. Which sort of oven have you in your experience found to be preferable, the oven with a solid arch at the bottom of the baking-chamber or the oven with a perforated arch at the bottom of the baking-chamber?

A. Well, as I stated before, the one having the solid arch baked the bread more uniformly.

Q. 25. Will you please give your reason for your opinion?

A. The solid arch gave a solid, uniform, steady heat, while the perforated arch would give what we would term a flash heat.

Q. 26. Which is the easier heat to control in baking, the solid, uniform heat, or the flash heat?

A. My workmen never seemed to have any difficulty in controlling the heat of either, but at times we had to throw a great deal of water into the McKenzie oven to cool the plates down, which we never had to do in the oven having the solid arch.

And be cross-examined by Mr. LIVINGSTON, he says:

X Q. 27. You refer, in your answer to the 3d question, to "the old fashioned wood oven"; was this oven such as is known as the old tile oven?

A. It was.

250 X Q. 28. Did you never use any hard coal in an oven of this construction?

A. Not to my knowledge.

X Q. 29. Why not?

A. Well, I cannot give you any good reason why. We took the tile out and put in a bottom of brick, and altered the furnaces to burn hard coal.

X Q. 30. With the exception of the alteration stated, was the oven the same as before?

A. Yes, sir.

X Q. 31. Did you then burn hard or anthracite coal in this oven successfully?

A. Yes, sir.

X Q. 32. Did you get a good solid heat for baking in this oven?

A. Yes.

X Q. 33. What sort of stuffs did you bake in it?

A. Breadstuffs. Bread, crackers, and cakes. When I speak of bread, I mean hard biscuit.

X Q. 34. Did you bake loaf bread at all in your business?

A. I did for a few months during the war.

X Q. 35. Have you in use at present any of these so-called tile ovens?

A. I have not, sir.

X Q. 36. When did you discontinue their use?

A. Several years ago.

X Q. 37. Have you anywhere in your possession the small tin box, with the reel inside of it, which Mr. Ball showed you as you say in your answer to the 10th question?

A. No, sir.

251 X Q. 38. How did the long endless chain oven work with respect to the quality of baking?

A. When it did work it baked satisfactorily.

X Q. 39. Were these apertures through the side walls of this endless chain oven?

A. Yes, sir.

X Q. 40. Can you tell me about when they were made in said side walls?

A. About 1851 or 1852.

X Q. 41. How long did you continue to use this endless chain oven, so constructed with apertures in the side walls?

(Objected to as irrelevant and immaterial.)

A. Until my present first reel oven was built.

X Q. 42. Did the openings through the side walls of the endless chain over communicate with the furnace or fire-box?

(Same objection.)

A. Yes, sir.

X Q. 43. So that the products of combustion could enter the baking-chamber through such openings?

(Same objection.)

A. Yes, sir.

X Q. 44. Will you be kind enough to mark on the drawing which I now hand you the places where those side openings were located, and

also state whether or not the said drawing is a sectional view of the said endless chain oven which you had in use as you state?

252 (Same objection.)

A. It looks a great deal like a sectional view of the endless chain oven I had in use. I have marked with red ink parallelograms to represent the openings referred to. (Drawing put in evidence and marked Exhibit Mason Endless Chain Oven.)

X Q. 45. About how many openings altogether were there in the side walls of this endless chain oven?

(Same objection. Counsel also here further seasonably objects to this line of cross-examination, as being apparently put in for the purpose of proving want of novelty, on the ground that the witness' name is not set up in the answer.)

A. I should think about forty.

X Q. 46. You say, in your answer to the 44th cross-question, that the figure on the drawing marked Exhibit Mason Endless Chain Oven looks a good deal like a sectional view of your said endless chain oven. Is it a fair representation of said oven—that is, substantially like it?

(Same objection.)

A. It has somewhat the appearance of it.

X Q. 47. Wherein was there any difference, if you notice any, between the drawing and the oven?

253 (Same objection, and also that it does not appear that the witness is an expert in the comparison of drawings.)

A. I can't see any difference, only I don't see any plates there represented. The inventor could get up a drawing that would represent the invention so as to be better recognized by me.

X Q. 48. Did your said oven contain an endless chain, provided with plates for holding bread, the said chain passing over reels or drums at respective ends of the oven?

(Same objection as to cross-question 45.)

A. The endless chain had plates to hold the bread. There was some arrangement by which the chain was made to travel. You might call them reels, or whatever else you cho'se.

X Q. 49. Will you now please state how the dampers were arranged in the first oven, which you say, in your answer to question 11, Mr. Ball built for you about 15 or 16 years ago?

A. The dampers were at the top of the oven, near the chimney, or in the chimney; I forget, now, which.

X Q. 50. Do I understand you that these dampers were in the flue running from the furnace to the chimney?

254 A. They were attached to the flue.

X Q. 51. Did they shut off communication between the furnace and the side chamber or space outside the baking chamber, or did they shut off communication between said side chamber and the chi'ney proper?

A. They shut off the communication from the side chambers and the chimney.

X Q. 52. Were there any other dampers in this first oven?

A. There were two dampers to the oven.

X Q. 53. Do you mean by the two dampers the ones that you have before referred to?

A. Yes, sir.

X Q. 54. Was this said first oven ever sheltered by any one, in any respect?

A. Yes, sir.

X Q. 55. By whom, and what alterations were made?

A. By Mr. Maydwell, by putting in new perforated arches.

X Q. 56. When was this alteration made?

A. About two months ago.

X Q. 57. Why did you have this alteration made?

A. Because I thought it would operate better.

X Q. 58. Please state what was the difficulty with the oven which led you to think that by altering it it would operate better.

A. I thought I would get more bottom heat, but I found that I
255 got too much bottom heat, and I am seriously thinking of closing the appertures up.

(So much of the answer as begins and follows the word "but" objected to as irresponsive by counsel for defendant, and as stating merely something that is contemplated, rather than fact, and therefore as inadmissible.)

X Q. 59. Was there any alteration made in the said first oven previous to the one you have just mentioned?

A. Yes, sir.

X Q. 60. What alterations, and when made?

A. I had some of the appertures in the upper part of the oven closed; I do not know when that was. I ought to say here that I opened these appertures again.

X Q. 61. Were the handles of the dampers in this first oven ever cut off?

A. Not to my knowledge.

X Q. 62. Were there any alterations besides these you have mentioned made in said first oven?

A. I may have made some experiments, but they amounted to nothing. I could not better its condition with all my experiments I tried.

X Q. 63. What object had you in view inmaking these experiments; what did you design to accomplish?

A. To see if I could make it a better baker than when it was originally put up.

256 X Q. 64. Please state when it was, as near as you can, that Mr. McKenzie altered the second oven which Ball built for you, to which you have referred.

A. It was altered by Mr. McKenzie several years ago, but I cannot give the year or the time.

X Q. 65. Can you not tell when this second oven was built for you by Mr. Ball?

A. No, sir.

X Q. 66. Was it not after the late war in this country had began?

A. I think not.

X Q. 67. Has this said second oven ever been altered since being rebuilt by Mr. McKenzie, as you have stated?

A. It has been repaired at various times, but I do not know whether Mr. Maydwell made any change in the flues or not.

X Q. 68. What interest have you in or under the letters patent on which these suits are brought?

A. I have no interest outside of the city of Baltimore.

X Q. 69. Question repeated.

A. I have no interest in these suits.

(Objected to as not responsive, by defendant's counsel.)

X Q. 70. Question repeated.

A. None.

X Q. 71. What right have you in the city of Baltimore in the said patent?

A. I own the right.

257 And being further examined by Mr. WITTER he says:

Re D. Q. 72. How do you fix the date when the first Ball reel oven was put up by you?

A. By entering into copartnership with Mr. Camp in the year 1855, and urging upon him to take an interest with me in the said right.

Re D. Q. 73. You say, in your answer to the 58th cross-question, that the alteration spoken of was made because you thought you would get more bottom heat. What did you find to be the fact?

A. I found that I got too much bottom heat, and put over a portion of the holes a very heavy piece of iron to deaden that heat.

Re D. Q. 74. You say also, in the answer to that question, that you seriously think of closing those apertures. Is that true?

(Objected to as improper and as calling for an intention of a party, which is inadmissible.)

A. I have thought of doing so.

Re D. Q. 75. Is the right which you have in the city of Baltimore anything more than the right to use your two ovens under the Ball patent at the present time?

(Objected to as leading.)

258 A. I am under the impression that when I purchased the right of Mr. Ball, I purchased it for all time.

Re D. Q. 76. Do you mean the right to use two ovens, or how?

(Objected to as leading.)

A. I mean that I consider that in me is invested the sole right for Baltimore City.

JAMES D. MASON.

Subscribed and sworn to before me this 9th day of July, 1872.

JOSEPH GUTMAN, JR.,
Examiner, &c.

GEORGE T. FREEMAN, a witness of lawful age, produced on the part of the complainant, having been by me first duly cautioned and sworn to testify the truth, the whole truth, and nothing but the truth in the matter of controversy herein, and being examined by Mr. WITTER, deposes and says as follows:

Q. 1. What is your name, age, residence, and occupation?

A. My name is George T. Freeman; I am thirty years of age; I reside at Jersey City, N. J.; I am a cracker backer.

Q. 2. How long have you been a cracker backer, or engaged in that business as apprentice or otherwise?

259 A. Sixteen years.

Q. 3. Did you ever use a reel oven? If yea, whose and where?

A. I have used Hosea Ball's in Newark, N. J., at the bakery of Wm. Titus & Brother, now William Titus.

Q. 4. When and for how long?

A. I did not use the oven very long, but I worked in the shop; I think it about fifteen years ago, but it may not been quite so long as that.

Q. 5. How did it work?

A. I never heard any complaint.

And being cross-examined by Mr. LIVINGSTON, he says:

X Q. 6. Have you not heard complaints to the effect that the oven to which you refer would not bake properly Army or ship bread?

(Objected to as already answered.)

A. Well, in regard to that question, I mean light crackers. I mean crackers that he baked for business.

X Q. 7. By your last answer do you mean that you never heard any complaint with respect to the manner that it baked light or small crackers?

A. I mean such crackers as he bakes at the present time.

X Q. 8. How did the oven bake Army crackers?

A. We couldn't get bottom enough to run steady.

260 X Q. 9. Do you know of any loaf-bread ever being baked in this oven?

A. No, sir.

X Q. 10. How long were you with Wm. Titus & Bro. and William Titus alone? From what time to what time?

A. I don't remember what time they dissolved partnership. I was with them about eight years—the two together; after they dissolved partnership I was with William Titus off and on, that is——

X Q. 11. About when did you leave them?

A. I think it was in 1865.

X Q. 12. What kind of stuff was baked at the bakery of Wm. Titus & Bro., or William Titus alone, while you were there?

A. Bread, cake, and crackers.

X Q. 13. Was there, at that bakery, any other kind of oven during the time you were there? If yea, what kind?

A. Tile ovens.

X Q. 14. The other stuff you have mentioned was baked in these tile ovens, was it not?

A. Bread and cake was, and some crackers.

X Q. 15. Upon the whole, which baked the best—the tile oven or this reel oven?

A. Well, I think the tile oven would bake the best crackers, but it wouldn't bake them so fast.

GEORGE T. FREEMAN.

Subscribed and sworn to before me this 9th day of July, 1872.

JOSEPH GUTMAN, JR.,
Examiner.

261 GEORGE TITUS, a witness of lawful age, produced on the part of the complainant, having been by me first duly cautioned and sworn to testify the truth, the whole truth, and nothing but the truth in the matter of controversy herein, and being examined by Mr. WITTER, deposes and says as follows:

Q. 1. What your name, age, residence, and occupation?

A. My name is George Titus; I am 38 years of age; I reside at Jersey City, N. J.; I am at present engaged in contracting.

Q. 2. Were you ever a partner of William Titus; if yea, where and in what business.

A. Yes, sir; at Newark, N. J., in the cracker business.

Q. 3. Did your firm ever have a reel oven of Hosea Ball; if so, when and how long were you interested in its use?

A. Yes; I think it was built in 1857, and I remained there in the neighborhood of two years after it was in operation.

Q. 4. How did it work?

A. It always gave perfect satisfaction while I was there.

And being cross-examined by Mr. LIVINGSTON, he says:

X Q. 5. What do you mean by the expression "perfect satisfaction?"

A. I mean that it baked all the stuff that we required of it,
262 and all that it was represented to do.

X Q. 6. What kind of stuff did you require of it?

A. Well, a general assortment—whatever the trade called for—from a soda cracker up to pilot bread.

X Q. 7. Do you mean to say that the said oven baked pilot bread satisfactorily?

A. It satisfied me in my trade; I handled most of the stuff that was baked there; I wasn't afraid to compare with any of them.

X Q. 8. Do you include in your answer Army pilot bread?

A. There was no Army bread required at that time; that was before the war.

X Q. 9. You don't know anything about the oven, then, since you left?

A. No, sir.

X Q. 10. Did you use any other oven in the bakery?

A. Yes, sir; we always used the old tile oven previous to this.

X Q. 11. Did you continue its use after having the said reel oven built?

A. The two tile ovens remained there and continued in use there ever since; I believe they are there yet.

X Q. 12. What was your particular line of duties as a member of the firm of Wm. Titus & Bro.?

A. Salesman on the road day and night, selling this stuff baked by the Ball oven.

263 X Q. 13. If you were on the road day and night, how do you know it was baked by the Ball oven?

A. I was there often enough to see.

X Q. 14. See what?

A. How the stuff was baked.

X Q. 15. Did you ever see any loaf bread baked in the said Ball oven?

A. No, sir; we did not make any loaf bread then.

X Q. 16. Did you also sell stuff baked by the tile ovens?

A. Yes, sir.

X Q. 17. Is William Titus, of Newark, your brother?

A. That is what I have always understood.

X Q. 18. Have you any interest in or under the Ball patent on which these suits are brought?

A. Not in the least.

X Q. 19. How long since you have seen your brother, William Titus?

A. In the neighborhood of four months ago.

X Q. 20. Who asked you to come here and testify in this cause?

A. Mr. Ball.

X Q. 21. Did you ever yourself act as an attendant upon the said reel oven whilst you were in partnership with your brother?

A. No, sir; I never had any occasion to.

X Q. 22. Are you a baker by trade?

A. I went to learn the business and worked at it a couple of years.

X Q. 23. These two years are the same you have before referred to, are they not?

264 A. No, sir; they were previous to that.

X Q. 24. Where was it?

A. At Plainfield, N. J.; that is where I first went at the baking business.

GEORGE TITUS.

Subscribed and sworn to before me this 9th day of July, 1872.

JOSEPH GUTMAN, JR.,
Examiner, &c.

Examination adjourned to July 10, 1872, at 11 a. m.

NEW YORK, *July* 10, 1872—11 a. m.

Present, counsel as before.

HOSEA BALL, of lawful age, complainant in this suit, produced on his own behalf, having been by me first duly cautioned and sworn to testify the truth, the whole truth, and nothing but the truth, in the matter of controversy herein, and being examined by Mr. Gifford, counsel for complainant, deposes and says as follows:

Q. 1. What is your name, age, residence, and occupation?

A. My name is Hosea Ball; I am 50 years of age; I reside at No. 860 Eighth avenue, New York City; I am a machinist and oven builder.

Q. 2. Are you the patentee of the patent on which this suit is brought?

A. I am.

265 Q. 3. What can you say as to the working of ovens built in accordance with that patent?

A. I have built some fifteen or sixteen of those ovens. Sixteen, exactly, I believe I built myself. Those ovens have always proved perfectly satisfactory to the parties that I built them for, to the best of my knowledge. At all events, they were all received after making the usual trial, and settled for without any question whatever. The second oven that I built of that kind was for R. G. & Peter B. Anderson, 219 Fulton street, New York City. After having been run in their business for nearly a year, R. G. Anderson was so much pleased with it that he wished to obtain an interest in the whole patent for the United States, and did so by buying a one-third interest for the sum of $1,833. I think it was cash which he paid me at the time, with a verbal understanding that he would furnish, or cause to be furnished, the means to carry on the business largely.

Q. 4. What can you say as to the working of your reel oven compared with the best ovens which preceded it?

266 A. I guaranteed, in putting these ovens up, that it should surpass in baking anything that the parties had before, and they were acknowledged to be so when they received them after being completed, in every place where I put them, baking a much handsomer bread on the average, and doing the work much cheaper, so far as labor is concerned, with much less fuel for the same amount of work than any other oven that I have any knowledge of.

Q. 5. Please explain under what circumstances it may be desirable, if at all, to have the heat introduced into the oven through appertures in the bottom.

A. I don't think it is desirable under any circumstances. There have

been ovens of this kind of my putting up altered by Duncan McKenzie or by his orders, and others built by him and represented to bake faster and better; but I built an oven in New Orleans expressly to experiment on the mode of bringing the heat in at the bottom. I found a great difficulty in getting an even and proper heat on the bread or biscuits or crackers, and altered it back to my own way of bringing in the heat from the sides, under a solid arch, all over the whole bottom of the oven,
267 lower down than originally built, and found a far better result in every particular, and more satisfactory to the parties having the oven. When I first commenced building ovens the bakers wanted what they called a solid heat, for baking most kinds of work, and there was a strong prejudice at the time against any kind of an oven to bake on iron plates. Some kinds of work bake with a very flashy heat, as bakers call it, not requiring to be in the oven any great length of time, and with that kind of work the holes coming in direct at the bottom bake very well, and perhaps a little more rapidly; but where work is required to lie in the oven a longer time than is required for the usual revolution of the reel—one revolution—the heat coming into the bottom is apt to scorch and spoil a good deal of work, which is the result in every oven that I have seen in which the heat is brought in in that way.

Q. 6. Do you recollect of building a reel oven for Messrs. Brinckerhoff & Co.?

A. I do; it was E. O. Brinckerhoff at the time that I built it; it has since been changed to Brinckerhoff & Co.

Q. 7. Where was the heat admitted into that oven?

268 A. Through the sides and rear wall.

Q. 8. Did you ever alter that oven or cause it to be altered by having holes made through the bottom for the admission of the heat?

A. I never did.

Q. 9. What, if any, alteration did you make in that oven respecting holes for the admission of heat?

A. I stopped up quite a number of the upper holes around the sides and rear of the bakery chamber. I stopped them off down to below the shaft, what we call the oven shaft.

Q. 10. Which holes, if any, did you leave open?

A. I left the holes open immediately over the arch up to about three feet above it; the holes in the sides and rear.

Q. 11. Do you recollect of building an oven for a Mr. Snell, of New Bedford?

A. I do.

Q. 12. Where was the heat admitted into that oven?

A. In the same way as in Brinckerhoff's, through the sides and rear wall, and not through the bottom.

Q. 13. Do you know of that oven ever having been altered, by making holes through the bottom for the admission of heat?

A. I do not; I have never looked into the oven, that I know of, since it was built.

269 Q. 14. Please state whether or not Duncan McKenzie ever explained to you any improvements in ovens patented by him.

A. He never did, sir.

Q. 15. When did you first know said McKenzie?

A. The first time that I ever saw him, to my knowledge, or met with him, was about two years ago, in the office of John McCollum; Mr. McCollum's son introduced me to him. Mr. McKenzie did not appear to know me at all. He made the remark, at the time, that he had been

looking for me for a good while, stating that he was going to prosecute me for infringing his ovens.

HOSEA BALL.

Subscribed and sworn to before me this 10th July, 1872.

JOSEPH GUTMAN, JR.,
Examiner, &c.

Examination adjourned to July 11, 1872, at 11.30 a. m.

JOSEPH GUTMAN, JR.

Complainants' Exhibit A.—J. G., Jr.

Specification of reissued letters patent to Hosea Ball, dated June 14, 1870, No. 4026.

Be it known that I, Hosea Ball, of the city, county and State
270 of New York, have invented a new and useful improvement in ovens, of which the following is a description:

Nature and objects of invention.

My oven is constructed with a series of bread-receiving tables or shelves suspended from a reel revolving within a chamber, into or through which the direct heat from the furnace is passed and properly distributed.

Description with reference to the drawing.

The accompanying drawing is a sectional view illustrating my invention.

Figure 1 is a vertical transverse section.

Figure 2 is a vertical section in a plane, coincident with the axis of the reel.

Like letters of reference indicate corresponding parts in both views.

A represents the fuel receptacle of furnace.

B, the ash pit; and

C, the combustion chamber, which communicates directly or indirectly in any proper manner with the chamber in which the bread-receiving shelves or platforms *h* are revolved.

D represents the shaft, and *f* the ends or arms of a reel by which the shelves *h* are suspended and revolved. The flues *c d* and openings *a e e'*, to permit the passage or circulation of gases into or through
271 the bread-chamber, may be located and arranged in any effective manner, and any suitable system of dampers may be employed to regulate the course or strength of the draught. In front of the oven is an opening, *h*, employed for the introduction of the bread, and closed by a door, *i*.

A chute, G, may be used for the discharge of bread, and the discharge may be made automatic by guides *g*, with which the edges of the shelves or platforms *h* will come in contact as the reel revolves, so as to incline the said shelves to the same angle as the chute.

The chute is to be closed by a suitable door during the baking operation.

Operation.

The shelves or platforms *h* are each in succession brought opposite the

opening *h* by the rotation of the shaft *d*, and a supply of bread placed upon them. The doors are then closed and the baking commenced.

The reel may be rotated as required during the baking operation to apply an equal heat to the bread upon the several shelves or platforms.

When the baking is completed the bread may be withdrawn
272 from each platform in succession, through the opening H, or, if preferred, it may be discharged, either automatically or otherwise, through the chute G.

Claims.

I claim as my invention—

1. One or more swinging bread-holders, suspended from the arms or end plates of a rotating reel, in combination with a furnace so arranged and connected that the products of combustion will pass into or through the chamber within which the bread-holders move.

2. In combination with a rotating reel and swinging bread-holders, a flue or one or more sides of the chamber in which the reel rotates, communicating with said chamber through apertures in the wall between them.

3. In combination with a swinging bread-holder, revolving in an oven, a discharging chute and tripping device, by which the bread is delivered from its platform and into the chute, substantially as and for the purposes described.

HOSEA BALL.

Witnesses:
EDWARD H. KNIGHT,
JAMES MELDRUM.

273 Whereas upon the petition of Hosea Ball, of New York, New York, for the extension of the patent granted to him September 23, 1856, reissued October 12, 1869, and again reissued June 14, 1870, for an oven, the undersigned, in accordance with the act of Congress approved the 8th day of July, 1870, entitled "An act to revise, consolidate, and amend the statutes relating to patents and copyrights," did, on the 14th day of September, 1870, decide that said patent ought to be extended:

Now, therefore, I, Samuel S. Fisher, Commissioner of Patents, by virtue of the power vested in me by said act of Congress, do renew and extend the said patent, and certify that the same is hereby extended for the term of seven years from and after the expiration of the first term, viz: from the 23d day of September, 1870, which certificate being duly entered of record in the Patent Office, the said patent has now the same effect in law as though the same had been originally granted for the term of twenty-one years.

In testimony whereof I have caused the seal of the Patent Of-
274 fice to be hereunto affixed this 14th day of September, 1870, and of the Independence of the United States the ninety-fifth.

[L. S.] SAMUEL S. FISHER.
Commissioner.

Complainants' Exhibit C.—J. G, Jr.

Specification of letters patent to M. A. E. M'Kensie, assignee of Duncan M'Kensie, May 1, 1860, No. 28130.

To whom it may concern:

Be it known that I, Duncan McKensie, of Brooklyn, in the county of

Kings and State of New York, have invented a new and useful improvement in the construction of baking-ovens; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings forming a part of this specification, in which—

Fig. 1 represents a transverse vertical section, taken through the fire places, ash-box and flues of my improved oven, showing the direction the heated currents take in leaving the fireplace.

275 Fig. 2 is a vertical longitudinal middle section, taken through the oven and brick-work, as indicated by the red line X X of Fig. 1, in which the central hot-fire flue is shown communicating with the main escape-pipe with its valves and dampers in the front and rear part of the flue passage. This figure further shows in dotted lines the outlines of the grate and fire bridge, with the escape passages for hot air.

Similar letters of reference indicate corresponding parts in both figures.

To enable those skilled in the art to fully inderstand my invention, I will proceed to describe its construction and operation.

The invention belongs to that class of bakers' ovens in which anthracite coal is used as fuel, where very little, if any, smoke is the result. In the drawings, A represents the fireplace with grate-bars, B, built up in brickwork, C. The fireplace with its grate-bars and ash-pit extends back a suitable distance, represented by the dotted lines, Fig. 2, where there is a bed, E, of brickwork built up, forming, with the arch, a passage leading back to the rear of the oven, through which the fire

276 from the furnace A plays freely. D D are a series of flues which lead off from the furnace and the space over fire bed E, and communicate with the oven, G, which is arranged above the masonry; these short flues are the only means of escape for the heat from the furnace, except what little will be absorbed and given out by radiation from the brick-work above the arch into the oven, and they (the flues) are sufficiently numerous to conduct off the heat very rapidly from the furnace and diffuse it through the oven.

I have referred to only one fireplace or furnace with side flues, but by referring to the drawings it will be seen that two are used, both communicating with the oven above by flues which are directed towards the sides of the oven, as indicated by red arrows, Fig. 1. Between the two furnaces is a coal receptacle, H, and above this receptacle and extending from the front to the rear of the oven is a horizontal flue, I, which communicate with a verticle flue, I^1, extending up in rear of the oven, as shown by Fig. 2; this lower and horizontal flue, I, communicates with the oven through holes in the front and

277 in the rear of this flue, which are closed by valves, K K, Fig. 2, which can be operated from the front of the oven by means of damper-rods, C C.

It will be observed that the end of the flue I, where the products of combustion escape into flue I^1 is enlarged into a chamber and bent downward somewhat in the form of an inverted cone. The point of communication with flue I^1, at the lower part of this chamber. By this enlargement and downward projection of flue 1, the draft of flue 1^1 acts equally upon the contents of flue I, drawing off the same more evenly and freely than if the flue I were continued horizontally out and opened directly into flue I^1. If the flue I were extended horizontally, as stated, the draft through the damper opening at the back end of flue I would be greater than the corresponding opening at the opposite end;

but by the enlargement and downward extension of the rear end of flue I the draft through both damper openings, K, are rendered uniform, and the baking operation thus improved and the fuel saved.

278 In the centre of the top of the oven is a valvular opening, L, which communicates with the main flue I^1 by a flue I^2, as clearly represented by the drawings.

In the oven G are arranged a suitable number of gravitating pans N, which are hung from rods N, which extend across from two circular revolving plates, R R, which are turned by a shaft, S, having its bearings in each side of the oven. The bread-pans are placed on these pans or swinging shelves N, and the whole number are rotated at one time by turning the shaft S; the bread is thus made to receive a uniform heat. The bread-pans are placed in and removed from the oven through door P, figure 2. The masonry C may be covered with a suitable thickness of metal, C^1, as represented in the drawings.

It will now be readily understood from the above description that when the fires are built up in the furnaces and the damper in the top of the oven opened, a direct ascending draught will take place, and the smoke and gas will all escape through the flue I^2; but when the

279 fires are well lighted this damper should be closed, and the front damper or the rear one in the lower central and horizontal flue I, or both dampers may be opened or partially opened, when a downward draught will take place, and the heated air escaping from the flues D will rise to the top of the oven on the sides and then descend in the centre of the oven to the central flue space or spaces and escape up the main flue F. The heated air will thus be made to circulate and to rotate in the oven and diffuse its heat throughout the entire oven apartment in a uniform and rapid manner, and instead of using heat by radiation, as ovens of the present construction, I obtain a direct heat from the furnace, and thus economise time and fuel; besides, with my arrangement of dampers, I am enabled to regulate the draught in firing up, and to control the heat of the oven in a perfect manner.

Having thus described my invention and improvement in baking-ovens, what I claim as new, and desire to secure by letters patent, is—

The combination of the hot air flues D, escapes K K, and flue I with the lower parts or floor of the oven C^1, as and for the purpose

280 herein shown and described.

I also claim the enlargement and downward extension of the rear end of flue I in combination with flue I^1, as and for the purpose herein shown.

I also claim the arrangement in combination with the oven G of the flues I^1, I^2, I, D, and the dampers K K and L, as and for the purposes herein shown and described.

DUNCAN MACKENZIE.

Witnesses:
M. M. LIVINGSTON.
WILLIAM THOMPSON.

U. S. circuit court, south dist. of N. Y. In equity.

HOSEA BALL
vs.
CARRINGTON A. FULLER.

SAME
vs.
JOHN T. WILSON.

SAME
vs.
BRINCKERHOFF ET AL.

SAME
vs.
EDWARD HARRIS.

SIR: Please take notice that witnesses will be examined and testimony taken before a competent officer, in behalf of the defendants in the above entitled suits, at the office of Chas. M. Keller, esq., No. 16 Murray st., in the city of New York, the examination to com-
281 mence at 11 o'clock on the 12th day of January, 1872, and to continue pursuant to adjournments.

Dated New York, Jan. 11, 1872.
Yours, &c.,

M. M. LIVINGSTON,
Solicitor for the def't Fuller, Brinckerhoff et al., & Wilson.

To GEORGE GIFFORD, Esq.,
Solicitor for complainants.

Due service of a copy of the above notice admitted this 11th day of January, 1872, with the understanding that an adjournment shall be made until Monday the 15 instant, at 11 o'clock, before commencing to take depositions.

GEORGE GIFFORD,
Complainant's Solicitor.

Circuit court of the United States for the southern dist. of New York. In equity.

HOSEA BALL
vs.
THOMAS R. HARRIS.

SAME
vs.
C. A. FULLER.

SAME
vs.
J. T. WILSON.

SAME
vs.
G. B. BRINCKERHOFF ET ALS.

Testimony taken for final hearing on behalf of the defendants, under and pursuant to the 67th rule in equity as amended, before
282 Albert K. Post, an examiner of this court.

NEW YORK, *Jan.* 12, 1872—11 a. m.

Present, counsel for the defendants, and at the request of the counsel for complainant the examination is by consent adjourned to Monday, January 15th, 1872, at 11 a. m.

NEW YORK, *Jan'y 15th*, 1872—11 a. m.

Present, Chas. M. Keller, esq., and M. Livingston, esq., of counsel for def'ts, and Geo. Gifford, esq., of counsel for compl't.

JOHN LEE, a witness called on behalf of the defendants, being duly sworn, in answer to interrogatories propounded by M. LIVINGSTON, esq., deposes and says as follows:

Q. 1. What is your name, age, residence, and occupation?

Ans. John Lee; I am 43 years of age; reside at 115 Elizabeth street, New York City, and am a baker.

Q. 2. By whom are you employed, and how long have you been so employed?

Ans. By Messrs. Brinckerhoff & Co., for about twenty years.

Q. 3. While so employed, was there ever, to your knowledge, a reel oven built for said Brinckerhoff & Co.; and if so, when first, and by whom?

Ans. Yes, sir; by Hosea Ball, in 1859, I think.

283 Q. 4. In this oven, was or was not the heat admitted directly into the baking chamber, and, if yea, in what manner?

Ans. It was heated from the sides and back. The heat as it passed up the sides, through the flues, it came into the oven.

Q. 5. Through what did it come to get into the baking chambers?

Ans. Through openings in the sides and back walls.

Q. 6. Was there, or not, any openings or holes in the bottom of the oven to admit flame or gases into the interior of the oven?

Ans. Not to the best of my knowledge; I don't think there was.

Q. 7. Was this oven ever afterwards, to your knowledge, altered or reconstructed? If so, when first, and what alteration was made?

Ans. Yes, sir; I think it was altered about 1860. I think all these openings in the side walls were closed and Mr. Ball opened holes in the bottom, so as to have all the heat from the bottom and none from the sides.

Q. 8. Did you, or not, see the oven while being so altered by Mr. Ball?

Ans. I see Mr. Ball superintending it.

Q. 9. During what month in 1860 was the oven thus altered?

Ans. I think it must have been about October, I think. It is

284 pretty hard to give day and date for these matters; I am pretty certain it was in the fall of the year 1860.

Q. 10. Please state how well the oven baked when first built; and how well it baked after being altered.

Ans. She wouldn't bake at all when she was first built; she gave too much top heat. She wouldn't give bottom to the bread. She baked very well after she was altered, after stopping up these side holes.

Q. 11. What was your position in the bakery referred to, previous to and for some time after the alteration spoken of by you?

Ans. I was working at the baking and the engine, both.

Q. 12. Were your duties such that you knew exactly what kind of work the oven turned out?

Ans. I was right alongside of the mouth of the oven; my working place was there.

Q. 13. Have you any knowledge of any oven having been built by Mr. Ball subsequent to 1860, wherein the flame or gases were permitted to enter the baking chamber through apertures or holes in its floor or bottom?

Ans. None that I know of.

Q. 14. Have you any knowledge of an oven built by Mr. Ball for a Mr. Snell, of New Bedford, Mass.?

Ans. Yes, sir.

285 Q. 15. What was the construction of this oven in respect to the admission of the heat or gases into the baking chamber?

Ans. She was the same as the Brinckerhoff's after she was rebuilt; the heat passed through the bottom. There were no side holes in Snell's oven.

Q. 16. In view of your last answer, will you please explain your answer to the 13th question?

Ans. I thought you meant before 1860, in your 13th question.

Q. 17. When was the oven built for Snell, to which you referred?

Ans. I think it was in 1862, or 1863. In 1862, I guess.

Q. 18. Did you see this oven which Mr. Ball built for Mr. Snell, and, if so, how did you come to go there to see it?

Ans. I was employed by Mr. Snell through Mr. Ball to go there to take charge of the bake-house.

Q. 19. How well did this oven built for Snell bake?

A. It baked very well.

Q. 20. How do you know that Mr. Hosea Ball built the oven for Mr. Snell to which you have referred?

Ans. Mr. Snell told me, and Mr. Hosea Ball's name was on the oven. It was on all the machinery and oven too. Mr. Ball told me when he engaged me that he built the oven.

286 Cross-examined:

X Q. 21. Where was Brinckerhoff & Co.'s place of business when the oven, as you say, was altered?

Ans. Grand street and 88 and 90 Elizabeth street, New York City.

X Q. 22. Can you not state more definitely when the oven was, as is alleged, altered?

Ans. Well, no; I could not; as near as I know, it was in the fall of 1860, I think.

X Q. 23. Who placed the oven you have spoken of as being afterwards altered in Brinckerhoff's place?

Ans. Mr. Ball, I suppose.

X Q. 24. What do you mean by your last answer?

Ans. Mr. Ball superintended the putting up of the oven, of course.

X Q. 25. Do you know that of your own knowledge?

Ans. Yes, sir.

X Q. 26. You mean, do you, that you saw Ball at Brinckerhoff superintending putting up the oven before it was altered?

Ans. Yes, sir.

X Q. 27. How far was the engine from the said oven?

Ans. About twenty or twenty-five feet, I think.

X Q. 28. Who else was engineer at that time, if anybody?

Ans. The first little time we were there, there was another
287 engineer. He was only there a little while; I don't know his name.

X Q. 29. How long a time elapsed between the putting up of the said oven and the time of its alteration, as you have stated?

Ans. The first day we went there, we only worked 5 barrels of flour. Then we went back to the Madison street bake-house and then came back and worked some little time longer, and then had to go back again for more alterations. The alterations were so frequent, it is hard to tell.

X Q. 30. Whom do you mean by we, in the last answer?

Ans. The men that was employed in the baking business.

X Q. 31. Who owned the bakery in Madison st.?

Ans. Mr. Brinckerhoff.

X Q. 32. How long was the oven in process of alteration?

Ans. You might say about a couple of months, I suppose. It was altered where it was standing.

X Q. 33. For what purpose was it altered?

Ans. To give more bottom heat to the bread.

X Q. 34. Who managed those alterations?

Ans. Mr. Ball.

X Q. 35. How do you know that?

Ans. I have seen him there superintending.

288 X Q. 36. Who was present while the alterations were being done?

Ans. I have called in every other day myself and seen alterations going in the oven. Mr. Ball and the mason were present. I can't tell the names of the masons, they were strangers to me.

X Q. 37. Did the oven work successfully before alterations?

Ans. No, sir.

X Q. 38. Why not?

Ans. She wouldn't give no bottom heat.

X Q. 39. When was that found out?

Ans. After the first day's baking.

X Q. 40. In your answer to the 32d question, you say that you suppose that the oven took about two months to be altered. Can you state more definitely the exact time?

Ans. I cannot.

X Q. 41. Are you positive that it took two months?

Ans. I am not.

X Q. 42. Are you positive it took seven weeks?

Ans. I couldn't say exactly how long it did take, in fact. It may have been done in four weeks, for all I know.

X Q. 43. You don't know when this oven was put in Brinckerhoff's, do you?

Ans. I think it was put in in the spring of 1860. In 1859 or 1860, I think. I think it was in 1860. I aint positive.

JOHN LEE.

289 Subscribed and sworn to before me this 15th day of Jan'y, 1872.

ALBERT K. POST,
Examiner, &c.

DUNCAN MCKENZIE, called as a witness on behalf of the defendant, and being duly sworn, deposes and says as follows:

Q. 1. What is your name, age, residence, and occupation?

Ans. Duncan McKenzie; I am about 48 years of age; reside at 230 Livingston street, Brooklyn; I am a bricklayer and builder.

Q. 2. Have you any knowledge of any reel oven, so-called, having ever been built under U. S. letters patent granted to Hosea Ball, and dated September 23d, 1856?

Ans. Yes, sir.

Q. 3. How many such ovens have you ever seen?

Ans. Four.

Q. 4. Please state in a general way how said ovens were constructed, particularly regarding the manner in which the heat reached the baking chambers.

Ans. They were heated with a furnace. The heat entered into side chambers on the two sides and rear of the baking chamber.

Q. 5. Did you, or not, see any of these ovens in use?

Ans. Yes, sir.

Q. 6. To whom did these ovens belong, or in whose bakeries were they?

290 A. Peter B. Anderson's, at 219 Fulton st., New York City; James D. Mason, Baltimore, Maryland; Thos. Watson, Philadelphia; Wm. Titus, Newark, N. J.

Q. 7. Were you ever, at any time, called upon to make any alterations in any of these ovens?

Ans. Yes, sir; in all of them. Previous to that I was called upon by Ball, Knapp & Co. to examine Anderson's oven, and give my opinion and judgment what would be the best way to give bottom heat, as they couldn't get any.

Q. 8. Was Anderson's oven the first one you altered; if so, what alterations did you make in it?

Ans. I closed all these openings up in the side and rear walls, took out the furnace and the arch over the furnace, put in a new furnace with direct heat through the bottom of the oven.

Q. 9. What do you mean by direct heat through the bottom of the oven?

Ans. So that the products of combustion entered direct through the bottom of the oven from the furnace, through flues or openings in the floor or bottom of the oven.

Q. 10. Were or not the three other ovens you have referred to altered by you in the same way?

Ans. All altered in the same way.

291 Q. 11. Please state, as near as you can, when you so altered each of said ovens?

Ans. Anderson's was altered in about November, 1860; Mason's, 1864; it might be the winter of 1863–4. It was cold weather at any rate. Watson's, it was in the summer of 1865; Titus, about 1865, sent for me to alter his oven; and he then took a mason into New York to look at my ovens, and then took it to hand to fix it himself. He ran it that way up to about the winter of 1868 or 1869, when I went out and put in a new furnace for him. I also altered Isaac McGray's oven in the same way. It was the same kind of oven built by Ball. That might be in the winter of 1866–7. It was during the holidays.

Q. 12. For what reasons did you alter these several ovens?

A. The reason they had them altered was to bake better, bake more, and to bake with less fuel.

Q. 13. How well these several ovens baked before being altered and how well after being altered?

Ans. Well, they gave, after the alteration, that element which was wanting in baking, a good bottom and spring to the cracker, a uniform bake.

292 Q. 14. What defect in the baking, if any, was your alteration made to remedy?

Ans. To give them the bottom that is required to bake a good biscuit.

Q. 15. Who devised or planned this alteration in these ovens to which you have referred?

Ans. I did.

Q. 16. Did you obtain a patent for the same; if so, when?

Ans. I did, on May 1st, 1860, of the United States.

Q. 17. Was there, or not, ever published in the Scientific American

an engraving and description of your oven, with apertures through the bottom, to which have just referred?

Ans. There was, in June 1860.

Q. 18. Who composed the firm of Ball, Knapp & Co., referred to by you in your answer to question 7?

Ans. Hosea Ball, Ivison W. Knapp, and Robert G. Anderson.

Examination adjourned to Jan'y 16, 1872, at 11 a. m.

NEW YORK, *Jan. 16th*, 1872—11 a. m.

Present, counsel for both parties; and the witness, Duncan McKenzie, being further examined by M. M. LIVINGSTON, esq., deposes and says as follows:

Q. 19. Did you ever at any time show and explain to the complainant, Hosea Ball, your improvement in ovens, described in your
293 patent of May 1st, 1860; and, if yea, when, and under what circumstances?

(Objected to as immaterial.)

Ans. I did; in the spring and summer of 1858. After being called by them to visit the Anderson bakery, thinking over the matter, I let Ball, Knapp and Company see this plan, and explained the working of it. Knapp and Anderson seemed to favor it; Ball was opposed to it, for the reason that, by admitting direct heat through the bottom or floor of the oven, I would carry dust, heat, and ashes all in direct to the bread; or, in other words, Ball said it would never work; that we couldn't bake by direct heat; that the draught would carry everything in with it.

Q. 20. In what manner did you explain this plan?

(Obj. to as immaterial.)

Ans. By a drawing and verbal explanation. It was at the request of Ball, Knapp & Co. that I gave them my ideas how they could improve to get bottom heat, as they hadn't it in the original; also, to make it a continuous baking oven.

Q. 21. Have you the drawing here to which you have referred? And, if so, please produce it.
294

A. Yes, sir; here it is.

(Counsel for defendants offers in evidence the drawing marked Def'd'ts' Exhibit No. 1.)

Q. 22. When did you first show and explain this drawing to Hosea Ball?

(Obj. to as immaterial.)

Ans. It must have been early in the year 1858.

And, being cross-examined by W. C. WITTER, esq., deposes and says as follows:

X Q. 23. How long, if you know, had any of the ovens of which you have testified been used—I refer to those which you say you altered for Anderson, Mason, Watson, Titus, or McGay—and to use before alteration?

Ans. That I don't know without taking Ball's statement.

X Q. 24. What do you mean by Ball's statement?

Ans. By him telling me, or his written testimony.

X Q 25. What did he tell you on that subject?

Ans. The one he referred to most at that time was Anderson's; I forget exactly. Anderson's oven was the one the whole talk was on, at that

time, about making improvements on it. I don't know that Mr.
295 Ball ever said anything about the length of time the Anderson oven had been baking before I altered it. The others I knew nothing about until the owners of them came after me.

X Q. 26. Then you don't know anything about how long either of these ovens had been used for baking before you altered it?

A. No, sir.

X Q. 27. After these ovens were all altered, as you have testified, were they all alike?

A. All alike, sir.

X Q. 28. In what manner was the heat, or products of combustion, whichever it was, conducted from the furnace fire to the article baking, after the alteration was made? Describe step by step.

Ans. The products of combustion were admitted direct from the furnace by a system of flues or openings through the floor or bottom of the oven, and not by the sides or rear, but through the bottom direct.

X Q. 29. Then the alteration you made was to make flues or holes in the bottom of the baking chamber, in place of those which were in the sides and rear; is that so?

Ans. There was more than that. I had to construct a furnace that was capable of burning anthracite coal or coke, so that the heat could
296 be admitted direct into the baking chamber, and that neither carbon nor ashes entered the said baking chamber, and made a continuous baking that never had been done before.

X Q. 30. Do you mean to say that anthracite coal or coke must necessarily be used to produce a continuous baking?

A. Yes; when direct heat is required to bake with.

X Q. 31. In what did the alteration of the furnace consist?

A. I can refer you for that to my patent and to the description in the Scientific American, which gives it more clearly in words than I can.

X Q. 32. Were the whole apparatuses, when altered by you, in conformity to your patent, dated May 1st, 1860?

Ans. The interior of the ovens was; but the same reel was retained that was in them before. Some of the parties added more pans to the reel, to get a greater baking capacity. That was all the difference.

And, being re-examined by M. M. LIVINGSTON, esq., deposes and says:

R. D. 33. Did you or not, in making your alterations in the ovens you have referred to, dispense with side chambers around the baking
297 chamber and with the apertures through the walls of such side chambers?

Ans. I did; I built them all up solid.

DUNCAN McKENZIE.

Subscribed and sworn to before me this 16th day of January, 1872.

ALBERT K. POST,
Examiner, &c.

EDGAR M. SAULPAUGH, a witness called on behalf of the defendants, being duly sworn, in answer to the interrogatories propounded by M. M. LIVINGSTON, esq., deposes and says as follows:

Q. 1. What is your name, age, residence, and occupation?

A. Edgar M. Saulpaugh; I am 36 years of age; reside at 27 De Voe st., Brooklyn; and I am a baker.

Q. 2. Were you ever at any time employed by Charles T. Goodwin at

his bakery in the city of New York; if so, from what time to what time?

A. I went to work for him the 14th Jan'y, 1848, and remained with him to 14th Jan'y, 1871.

Q. 3. Have you any knowledge of a reel oven having been built for said Goodwin; if yea, when first, and by whom?

Ans. Well, I can't exactly say when the oven was built; but I
298 was there and saw it built. After they got it half up, it fell down again. They went to work then and started fresh, and built her up. I was the man that was about to take charge of her when she was built, and I was very anxious to be around and see about her. Mr. Knapp built her.

Q. 4. How was the oven constructed in respect to the manner of admitting heat into the baking chamber?

Ans. Well, sir, she had one solid floor. In the centre of this floor, cut right in, there was a fire-box in front of the oven; over this fire-box there was a solid arch from wall to wall built clear over the fire-box. These were little, small flues, that took this heat that spread under the solid arch, carried it up through both sides and rear of the oven, entering into the chamber through pigeon-holes. I call them pigeon-holes; they were all around the sides and the rear of the oven, or baking-chamber.

Q. 5. Were there or not in this oven, as built by Knapp, any openings in or through the floor or bottom of the baking chamber, to admit the products of combustion from the fire-box to the baking chamber?

Ans. There were not, sir.

299 Q. 6. Was this oven ever afterwards altered or reconstructed by any one; if so, when, by whom, & how?

Ans. It was, sir. Well, I don't exactly know the time; when I had run the oven about a year or so, as near as I can come to it, before it was altered. It was altered by McKenzie. The solid arch was taken out; instead of one fire box there was two put in, one on each side of the oven; over those fire boxes there were two arches turned, and at the back end of these arches there was openings for the heat to go direct up into the baking chamber; and also, at the sides of these arches, there was little, small flues that took the heat direct into the baking chamber. Nothing passed up the walls, rear, or sides.

Q. 7. Were all these openings and flues made through the bottom or floor of the oven?

Ans. They were all made through the bottom or floor.

Q. 8. Were there, or not, any openings or passage holes, as you call them, through the rear or side walls of the oven after it was altered?

Ans. None at all, sir.

Q. 9. Please state how well the oven baked before being so al-
300 tered or reconstructed by McKenzie?

Ans. Well, sir, before the oven was altered I used to work pretty hard myself and men I had with me, and I managed to bake, in ten hours, from 32 to 34 barrels of flour a day, and in baking this flour, I had a great deal of trouble in keeping the top heat off the crackers. In fact, I could not keep it off. It was all top and no bottom. I was compelled to take the bread out of the oven many a time without being baked enough on account of this severe top heat; therefore, it made the crackers very hard and flinty.

Q. 10. How well did this oven bake after being altered and reconstructed by Mr. McKenzie?

Ans. I managed to get a good, solid bottom heat. I also got a regu-

lar top heat for the crackers; my bread use' to spring up a great deal lighter than it did before. It ate better, and looked better in every way. It was packed and shipped a great deal sooner after being baked than before. I then run in two hours from 50 to 60 barrels, not 60 as often as I did 50. Sometimes I have run sixty barrels after the
301 alterations. It was all straight bread, no stoppage or shifting, but worked right straight along. What I mean by straight bread is one kind of bread worked through the day.

Q. 11. What was the effect upon the bread before the oven was altered, when you tried to get a good bottom to the bread?

Ans. I burnt it mostly all up. I didn't burn it clear through, but so it was not saleable.

Cross-examination waived.

EDGAR M. SAULPAUGH.

Subscribed and sworn to before me this 16th day of Jan'y, 1872.

ALBERT K. POST,
Examiner, &c.

HENRY ROTH, a witness called on the part of the defendants, having been first duly sworn, in answer to interrogatories propounded by counsel for defendants, deposes and says as follows:

1. Q. What is your name, age, residence, and occupation?

A. Henry Roth; I am 49 years of age; I reside at the corner of 16th street and Avenue B, in the city of New York; I am a baker.

2. Q. Were you ever employed by William Titus, of Newark,
302 N. J.; and, if so, when and in what capacity?

A. I was in 1857, as a bread and cracker baker.

3. Q. How long did you stay with Mr. Titus?

A. About three years.

4. Q. Do you know whether or not a "reel oven," so called, was ever built for Mr. Titus?

A. Yes, sir; there was.

5. Q. Who built it for Mr. Titus?

A. Mr. Ball.

6. Q. When did Mr. Ball build it?

A. In 1857.

Q. 7. How did the heat get into the oven from the fire box?

A. There were little small holes all around the sides. There were none on the back. I don't know if there were any on the back.

8. Q. Were there any holes through the bottom of the oven for the fire to come up through?

A. No, sir.

9. Q. Did you do any baking in this oven?

A. Yes, sir.

10. Q. How did the oven bake?

A. The oven baked on top and had no bottom, and was all raw inside.

11. Q. What was you baked in this oven?

A. Loaf bread.

12. Q. How long did you use the oven?

A. I used the oven three or four times, but could do nothing with it.

And being cross-examined by counsel for plaintiff, deposes and says:

303 13. X Q. What year was it that you baked bread in this oven?

A. In the years 1858 and 1859.

14. X Q. Had you used that sort of oven before?

A. No; I used tile oven before; and after he don't go I used tile oven again.

And being further examined by counsel for defendants, deposes and says:

5. R. D. How many times was that reel oven used in all while you were there?

A. Well, I used it sometimes for a week *sometimes for a week*, and then had to stop and go down stairs and use the tile oven. I had to stop because nobody was satisfied with the bread.

HEINRICH ROTH.

Subscribed and sworn to before me this 16th day of January, 1872.

ALBERT K. POST.
Examiner, &c.

Examination adjourned to Jan'y 17th, 1872, at 11 a. m.

NEW YORK, *Jan'y* 17, 1872—11 a. m.

Present, counsel for both parties.

The examination is by consent adjourned to 1.45 p. m.

NEW YORK, *Jan'y* 17, 1872—1.45 p. m.

304 Present, counsel as before.

The witness not appearing, the examination is still further adjourned to Jan'y 19, 1872, at 11 a. m.

NEW YORK, *Jan'y* 19, 1872.—11 a. m.

Present, counsel for both parties.

SAM'L BENNETT, j'r, a witness called on behalf of the defendants, and being duly sworn, in answer to interrogatories propounded by M. M. LIVINGSTON, esq., deposes and says as follows:

Q. What is your name, age, residence, and occupation?

A. Samuel Bennett, j'r; my age is 34; reside at 176 Forsyth street, New York City, and I am an engineer.

Q. 2. Were you ever employed by a corporate company styled the U. S. Patent Baking Company; if so, from what time until what time?

A. Yes, sir; I think from the 14th day of May, 1862, for the next two years.

Q. 3. How many ovens for baking had this company?

Ans. One.

Q. 4. Please describe this oven, particularly in respect to the manner in which it was heated?

A. It was heated by three furnaces with flues running under the bottom of the oven, and the tops of these flues were all pigeon-holed,
305 and the heat passed through these pigeon-holes into the oven.

Q. 5. Were or not these pigeon holes so arranged that the flames or gases from the furnaces passed directly from the furnace into the oven?

Ans. Yes, sir; they were.

Q. 6. Were there or not any openings or pigeon holes in either side or rear walls to allow the heat to enter?

Ans. The furnaces were in the rear walls, situated in the rear of the oven. There were no pigeon holes or openings in the side or rear walls to allow the heat to enter.

Q. 7. How well did this oven bake?

Ans. Very good.

Q. 8. How good?

A. Well, it baked as good as any oven I ever seen.

Q. 9. How much work could you turn out with this oven?

Ans. From 100 to 125 barrels of flour in ten hours. We have baked as high as 160 barrels in eleven hours.

Q. 10. Who, if you know, was the superintendent of this bakery during the time you have referred to?

A. Mr. Hosea Ball.

Q. 11. Do you know under whose direction the oven was built?

Ans. Under the direction of Mr. Ball.

Cross-examination waived.

303 SAM'L BENNETT, JR.

Subscribed and sworn to before me this 19th day of Jan'y, 1872.

ALBERT K. POST,
Examiner, &c.

MICHAEL CLANCY being called as a witness on behalf of the defendants, and being duly sworn, in answer to the interrogatories propounded by M. M. LIVINGSTON, esq., deposes and says as follows:

Q. 1. What is your name, age, residence, and occupation?

Ans. Michael Clancy; I am about 38 years old; reside at 52 Sheriff st., N. Y., and am a laborer.

Q. 2. Were you ever employed by a corporate company styled the U. S. Patent Baking Co.; if so, from what time to what time?

Ans. Yes, sir; I was there from June, 1862, for some four or five years, as long as Mr. Ball had the place.

Q. 2. How many ovens for baking had this company?

Ans. One.

Q. 3. How was the oven heated?

Ans. It was heated by three large furnaces with flues from each furnace running under the bottom of the oven and opening through pigeon holes into the place where the reel was.

307 Q. 4. Did not the flame or gases from the furnaces pass through these flues up through the bottom or floor of the baking chamber, the place where the reel was?

Ans. The heat or flames came right up through the bottom of the oven, through tho-e pigeon holes.

Q. 5. Were there or not any openings or pigeon holes in either side or rear walls to allow the heat to enter the place where the reel was?

Ans. Both sides were solid brick and the top was flagged over, and the furnaces were at the rear end of the oven. There were no openings at the rear.

Q. 6. How long did this company exist, if you know?

Ans. Well, I don't believe that the company existed more than two years. Mr. Ball had it himself for the balance of the time I was there.

Q. 7. What was the quality of the baking done by this oven?

Ans. It used to bake splendidly.

Cross-examination waived.

MICHAEL CLANCY.

Subscribed and sworn to before me this 19th day of May, 1872.

ALBERT K. POST,
Examiner, &c.

308 Examination adjourned by consent to new notice.

Circuit court of the United States, southern district of New York. In equity.

HOSEA BALL
vs.
CARRINGTON A. FULLER.

SAME
vs.
JOHN T. WILSON.

SAME
vs.
BRINCKERHOFF ET AL.

SAME
vs.
EDWARD HARRIS.

Edward G. Thompson, one of the standing examiners of this court, does hereby certify that he was the associate and partner of the late Mr. A. K. Post at the time of the taking of the foregoing depositions in the above entitled causes; that he knew of the taking of the same by the said Mr. Post; that he has been appointed to succeed Mr. Post as one of the examiners of this court; that the said depositions have been continually in the possession of Mr. Thompson since the decease of Mr. Post, and from the entries on the books of the late firm of Thompson & Post, it appears that the foregoing manuscript contains all the depositions in the above entitled causes that were taken before the said Mr. Post.

Dated New York, December 11th, 1872.

(S'g'd) E. G. THOMPSON,
Examiner.

309 (Endorsed:) U. S. circuit court, southern dist. of New York. Hosea Ball vs. Carrington A. Fuller. Same vs. John T. Wilson. Same vs. Brinckerhoff et al. Same vs. Edward Harris. Depositions on the part of the defendants & taken before A. K. Post, examiner. Filed Dec. 11th, 1872.

All of which we have caused by these presents to be exemplified, and the seal of the said circuit court to be hereunto affixed.

Witness the honorable Nathan , associate justice of the Supreme Court of the United States, next in precedence to the late chief justice, at the city of New York, in the southern district of New York, this 19th day of May, in the year of our Lord one thousand eight hundred and seventy-three, and of our Independence the ninety-seventh.

(Signed) KENNETH G. WHITE, *Clerk.*

I, Samuel Blatchford, judge of the said circuit court, do hereby
310 certify that the foregoing exemplification is in the form of law.

(Signed) SAM'L BLATCHFORD,
U. S. Cir. Court.

(Endorsed:) 6811. No. 18. Offered by def'ts June 13, '73. (Signed) F. B. Vinot, d'y cl'k.

Supplemental answer.—Presented May 21, '73; admitted and filed June 13, 1873.

U. S. circuit court. In equity.

HOSEA BALL ET ALS.
vs.
JAMES HALL ET ALS. } No. 6811.

To the hon'ble the judges of the circuit court of the United States for the fifth judicial circuit, district of Louisiana:

The supplemental answer of N. A. Baumgarden & Justin Langles, composing the firm of Baumgarden & Langles, domiciled in New Orleans, filed with leave of the court to the bill of complaint filed by Hosea Ball & Margaret Haughery, with respect shows:

That since their filing of the original answer in the above case they have discovered facts and circumstances of which they were entirely ignorant at the time and long subsequent to the filing of said
311 answer, and which in their opinion constitute a valid and sufficient defence to plaintiffs' complaint, and which defence is hereby set forth in manner and form as follows, to wit:

These defendants, on information and belief, deny that said original letters patent or said reissued letters patent No. 3666 were surrendered as by complainant alleged, for good and lawful cause, or that complainant in that respect complied in all things with the acts of Congress in such case made and provided.

These defendants, on information and belief, further deny that either of said reissued letters patent, and more particularly No. 4026, are for the same invention as that described, claimed, and shown in said original letters patent dated September 23d, 1856.

And these defendants, on information and belief, say that said surrenders of said original letters patent and the reissue thereof, No. 3666, one or both, was or were made for the express purpose of introducing no matter not shown, suggested, or indicated in the specification,
312 drawing, or model filed with the original application, and also for the purpose of obtaining a claim broader than the invention and broad enough to cover the invention of subsequent inventors and patentees.

And these defendants solemnly declaring that the facts on which the aforesaid defences are founded were completely unknown to them at the time of their filing their original answer and for a long time afterwards, and it was not until very recently that they obtained the requisite information through a friend who had had access to complainant's original patent and the reissues thereof at the Patent Office in Washington City.

In consideration of the premises petitioners respectfully pray your honors to grant them leave to file the above-amended answer and the defences therein contained as a supplement and addition to the defences contained in their original answer on such terms and conditions as your honors may deem conformable to the principles of equity and justice. And your defendants, as in duty bound, will ever pray.

(Signed) G. SCHMIDT,
Solicitor for Def'ts.

(Signed) E. C. BILLINGS,
Of Counsel.

313 Justin Langles, one of the defendants in the above suit, declares on oath that all the facts set forth in the foregoing answer stated on his own knowledge are true, and all those stated as derived from others he believes to be true, and that defences relied on in the foregoing answer was communicated to him through a letter received a few weeks ago; he further declares that the exclusive management of this suit has been left to himself, and that his partner has no knowledge of the above facts except what he has derived from him.

(Signed) JUSTIN LANGLES,
For Himself and for N. A. Baumgarden.

Sworn to & subscribed before me this 21 May, '73.
(Signed) F. B. VINOT,
U. S. Comm'r.

Supplemental answer.—Filed June 13th, 1873.

U. S. circuit court.

HOSEA BALL ET ALS. *vs.* JAMES HALL ET ALS. } No. 6811.

The supplemental answer of N. A. Baumgarden & Justin Lang-
314 les to the bill of complaint brought against them and others in this honorable court respectfully shows

That in compliance with their allegation in the eighth paragraph of their original answer, and with a view to obtain a final issue on the matters and things in said answer contained, and to obviate the objections upon which the order of this honorable court of the 3d of April last are predicated, these respondents herewith set forth distinct references to the various publications containing a description of reference to the patent of Louis Joseph Covlet granted on the 13th June, 1846, and the improvements thereof granted in the years 1846, 1847, & 1848, to wit:

1°. In the Bulletin des Lois, No. 1351, for the month of November, 1846, page 1130, No. 435.

2°. Same work, No. 1455, for the month of February, 1848, page 232, Nos. 672 & 673.

3°. Same work, No. 216, for October, 1849, page 524, No. 307.

4°. Catalogue des Brevets et Inventions du 1ier Janvier au 31 Decembre, 1846, dressé par ordre du ministre de l'agriculture et du
315 commerce. Paris, 1847, page 130, No. 3733.

5°. In the same work for the year 1847, page 127, two improvements mentioned.

6°. Same work for 1848, page 59, another improvement patented.

7°. In a work published in Paris in 1851, entitled "Genie Industriel," Revue des Inventions Françaises et étrangeres, volume 2d, pages 221 & 222, is to be found a description of Covlet's oven, and at page 284 of same volume is a diagram showing the vertical section of the said patented oven

All the above books and documents are in possession of the respondents and will be produced in due time.

In consideration of the premises these respondents respectfully pray that the plaintiffs be required to make up the issue in the cause, and that after due proceedings their bill of complaint be dismissed and the

complainants be condemned to pay them their reasonable costs in the defence of this suit expended, and that they have general relief. And, as in duty bound, they will ever pray, &c.

(Signed) E. C. BILLINGS,
Solicitor for Respondents.
" G. SCHMIDT,
Of Counsel.

316 *Order pl'ff's rule for injunction discontinued.—Extract from minutes of* 14 *June*, 1873.

HOSEA BALL ET ALS. *vs.* JAS. HALL ET ALS. } 6811.

The rule continued from yesterday was called up, when, on motion of J. R Beckwith, solicitor for complainants, it is ordered that said rule be discontinued.

Appointment of D. Urban, comm'r, to take testimony.—Filed August 18*th*, 1873.

Circuit court of the United States, district of Louisiana. In equity.

HOSEA BALL ET ALS. *vs.* JAMES HALL ET AL. } No. 6811.

By virtue of the authority vested in me by the order of his honor Wm. B. Woods, presiding judge of said court, I do hereby name D. Urban, esq., a commissioner of this court, commissioner to take the testimony in the above-entitled cause.

Done at New Orleans this 18th day of August, 1873.

(Signed) F. A. WOOLFLEY, *Clerk.*

317 *Replication to supplemental answer.—Filed August* 23*d*, 1873.

Circuit court of the United States, district of Louisiana. In equity.
No. 6811.

The joint and several replication of Hosea Ball and Margaret Haughery, to the supplemental answer, joint and several, of N. A. Baumgarden and Justin Langles.

These repliants, reserving unto themselves all and all manner of advantage of exception to the manifold insufficiencies of the said supplemental answer, for replication thereunto say that they will prove their said bill to be true, certain and sufficient in law to be answered unto, and that said supplemental answer of said defendants is uncertain, untrue, and insufficient to be replied unto by these repliants; without this, that any other matter or thing whatsoever in said supplemental answer contained, material in law to be replied unto, confessed, avoided, traversed or denied is true.

All which matters and things these repliants are ready and
318 will prove, as this honorable court shall direct; and humbly pray as in and by their said bill they have already prayed.

(Signed) J. R. BECKWITH,
WHITAKER & RICE,
Solicitors for Compl'ts.

Entry in chancery order-book, August 23d, 1873.

HOSEA BALL ET ALS. vs. JAS. HALL ET ALS. } No. 6811.

The complainants' have this day fi ed their replication to the supplemental answer of defendants.

Testimony taken before D. Urban, special comm'r & examiner.—Filed April 8th, 1875.

UNITED STATES OF AMERICA:

Circuit court of the United States, district of Louisiana. In equity

HOSEA BALL ET ALS. vs. JAMES HALL ET ALS. } No. 6811.

Be it known that on this day of August, 1873, before me, D. Urban, a United States commissioner, duly commissioned and qualified,
319 in and for the district of Louisiana, and duly appointed special commissioner and examiner in the above-entitled cause, by said circuit court, personally came and appeared Mr. Smith Johnson, a witness on behalf of complainants in this cause, no other witnesses appearing.

Present, Messrs. J. R. Beckwith and Wm. R. Whitaker, on behalf of the complainants.

Presents, G. Schmidt, esq., on behalf of the defendants.

Here, Mr. Schmidt, solicitor for defendants, offered his protest to have it hereto annexed and made part hereof, marked A for identification.

Whereupon, on the suggestion of Mr. G. Schmidt, that he had only received notice on yesterday, the 22d day of August, 1873, between 11 and 12 o'clock a. m., to have testimony taken before me, the said special commissioner and examiner, on the 23d day of August, 1873, at 12 o'clock m., and by consent of J. R. Beckwith and Wm. R. Whitaker, the taking of testimony in this cause was continued till Monday, August 25th, 1873, at 12 o'clock m., but he, the said G. Schmidt, not waiving
320 his former or any exceptions.

MONDAY, *August 25th*, 1873.

Pursuant to adjournment, the taking of testimony in this cause was resumed, and the witnesses on behalf of complainants in this cause appearing.

Present, J. R. Beckwith, esq., and W. R. Whitaker, esq., on behalf of complainants.

Present, G. Schmidt, esq., on behalf of defendants.

Deposition of JOHN FRITH JOHNSON, a witness on part of the complainants, of lawful age and sound mind, who, being first duly sworn to tell the truth, the whole truth, and nothing but the truth, deposes and says:

(Mr. G. Schmidt, solicitor for the defendants, objects to the examination of the above-named witness, on the ground that the defendants, his clients, have not been notified of complainant's intention of examining any witness by the name of Johnson.)

Being sworn on his voir dire, and being examined by counsel for the defendants, the said Johnson declared that he had no interest,
321 either direct or indirect, in the matters at issue in this cause; then being further examined by W. R. WHITAKER, esq., solicitor for complainants, said witness further deposes and says:

My name is John Frith Johnson; my age is 35 years; my occupation is that of a brick-mason; my residence in the city of New Orleans; I have been in the employ of Messrs. Baumgarden and Langles, in this city, on Delord street; I was there employed to lay bricks; I do not recollect the month I was employed there, but it was while they were building an oven there; I was working on that oven. Mr. Langles was present most of the time and superintending said work, and a man by the name of Isidore was the boss mason; that is, I was working under his orders; at the time that I was working at said oven there was no reel oven of the kind that we were constructing in operation at said bakery; the only other mechanical oven in operation at the said bakery at that time was the endless-chain oven; the oven that I was working on
322 was a new oven, but was taken down and rebuilt; I was engaged at both the taking down and rebuilding of the oven. I was not working on the oven until it was entirely finished; when I left off working on the oven, the brickwork was about done; the fire-box of the oven was finished when I left it; I mean by that, the arch over the grate-bars was completed; the flues in the arch were finished when I left off working; the reel was not put in at that time. One flue was built on the level of the hearth of the oven, and that was in the rear of the chamber in which the reel revolves, and the other was in the top of the arch over the reel chamber. I do not know whether it was in the centre or in the rear.

Q. As the oven was constructed, was there any brickwork between the fire-box and the reel space?

A. I did not see any.

Q. As you left that oven, had a fire been built on the grate in the fire-box, would the smoke and flame and product of combustion pass up into the reel space above the fire-box?

(Solicitor for defendants objects to this question as being a
323 matter of opinion of the witness, who is not examined as an expert, but simply as a workman in relation to facts within his personal knowledge.)

A. I should think the heat would pass into the reel-oven, and so would the flames also; providing that the bottom flues were closed and the other flue open, then it would do that.

Q. Was there any covering over the fire-box and between the reel-oven, to stop the flame from going upwards into the reel-oven?

A. I did not see any while I was there.

Here counsel for complainants shows the witness model marked C, and asks the witness as follows:

Q. Will you look at model C and state whether in the oven you worked on for the defendants the top of the fire-box was open, as shown in that model?

A. The front was like the model, and when I left it the fire-box was open, as shown in model C, but it had an arch over the grate bars.

Q. Was the arch over the grate bars a solid brick arch, or had it holes in it?

324 A. I never noticed that at all.

Q. Was there any flue connecting with the fire-box, carried up

through the wall in such a manner that it did not open into the reel space?

A. I did not see any flue.

Q. Did all the flues you saw open into the reel space?

A. Yes, sir; all the flues that I saw opened into the reel space.

Q. Was the brick-work done when you stopped working there?

A. I cannot particularly say.

The defendants reserving to themselves the benefit of the exceptions already taken to the right of the examiner to take testimony in this cause, as well as their objection that no notice of the name of the persons to be examined has been given, proceeds to cross-examine the said witness, who further says:

My present employment is that of a brick-mason. I am only a journeyman mason. I have never been privately examined by any one in relation to the testimony which I have given in this case. I have never been spoken to on the subject by any one. I don't recollect the month or the week when I commenced on that work. I never keep the
325 time of my gang to work. I do not recollect at what season of the year it was when I began to work. I was engaged on that work about a week and a half or two weeks. I do not know the size of the oven at which I was working at; it was not my business to ascertain that. I do not know the quantity of bricks that were used in the construction of the said oven. In building that oven we used different kinds of bricks. I do not know what quantity of fire-bricks we used; I think we did use fire-bricks in the furnace. The ordinary bricks we used were what they call salmon bricks, but I do not know what quantity we used. The oven was completed to its original height, I think, with the fire-doors in arch put in, and all the fire-fronts, the paving of the oven in also. I do not recollect the thickness of the wall; I can't say whether there were two and a half, three, or four bricks thick. I think it was near five bricks thick; portions of it. The reel, when I left, was not in. By a reel I understand a revolving wheel. I have never seen the oven since I left it. I do not know how many pans or shelves there are to a reel. I have not the slightest idea of the size of
326 the reel, but I have seen the shaft, but never measured it. I saw the shaft when I was working there, laying then on the floor, but do not know whether it was for the oven or not. I am no machinist, nor do I pretend to be one; I am a journeyman bricklayer. I do not understand the difference between direct heat and radiating heat. I mean by a damper, a sliding door, to leave out heat and keep it in. When I speak of flues, I mean flues built of brick.

Redirect by counsel for complainants:

Q. Will you state, as near as you can, the estimate of the outside measurement or size of the brick-work over the oven?

A. It might be over ten feet across the front, from corner to corner; I cannot say; I never measured it, neither did I measure the height. I think the depth of it was about over twelve feet, but I can't state exactly, because I never measured it.

Q. How high do you think the oven was?

A. From the floor, I think it was about twelve feet; but can't say.

(Signed) J. F. JOHNSON.

327 Sworn to and subscribed before me this 25th of August, 1873.

[L. S.] (Signed) D. URBAN,

U. S. Com'r & Special Examiner.

Deposition of WM. R. WHITAKER, a witness on behalf of the complainants, of lawful age and sound mind, who being first duly sworn to tell the truth, the whole truth, and nothing but the truth, deposes and says:

(Here counsel for the defendants objects to the examination of this witness, on the ground as to that set forth in the exception of the previous witness, Johnson.)

My name is William R. Whitaker; my age is 35 years; my residence is in the city of New Orleans; my occupation is that of an attorney at law. At the invitation of Mr. Baumgarden and Mr. Hall (James), the owner of the so-called Hall patent, I visited the bakery of Baumgarden and Langles, on Delord street, my object being to ascertain *my* personal observation whether a reel-oven they were then constructing at their bakery was an infringement upon the Ball patent bake-oven, in
328 which Mrs. Margaret Haughery, of this city, has and had an interest. My purpose in going was fully understood by the gentlemen named. I inspected the oven while it was in process of construction; examined the brick and iron work. I believe I got inside of the oven. I know that I got far enough inside to see the inside of it. The brick-work of the oven, the fire-box, draughts, and flues were substantially like the model C without the reel. The reel was an eccentric, like the one in model D. The oven I saw building was substantially Hall's patent bake-oven, patent No. 108258, without the reel. The reel was precisely that of Duncan McKenzie's patent No. 115626, as shown by model D, the fire-box draught and flues being so arranged as to take heat and products of combustion directly through the reel-chamber. I remember no arch or cover over the fire-box and between that and the reel-chamber.

Q. Were you shown at that time any illustration of the proposed oven, by either Mr. Baumgarden or Mr. Hall?

(Counsel for the defendants objects to anything that has been
329 done by Mr. Hall, in so far as it is intended to have any effect upon his clients, Messrs. Baumgarden & Langles.)

A. *I*. little while before I went up to the bakery, on the visit above testified to, Mr. Hall and Mr. Baumgarden called upon me together at my office; I received from one of the gentlemen, I cannot say which, a wood-cut illustrating Hall's patent bake-oven, and was informed that the oven part but not the reel of the new oven of Baumgarden and Langles was being constructed like that. I took the wood-cut with me when I visited the oven, and found that the representation made to me was substantially correct. Mr. Baumgarden and Mr. Hall were both present at the time I received that wood-cut, and the explanation; I will produce that wood-cut to be annexed to this deposition.

When, for want of time, the further taking of testimony in this case was continued till to-morrow, Tuesday, 26th, 1873, at 1 o'clock p. m.

TUESDAY, *August 26th*, 1873.

Pursuant to adjournment, the further taking of testimony in this case was resumed, and the witness, William R. Whitaker, reappearing.
330 Present, J. R. Beckwith, esq., on behalf of the complainants.
Present, G. Schmidt, esq., on behalf of the defendants.

Being further examined by Mr. J. R. BECKWITH, the witness further says:

(Here the witness produces the "illustrated wood-cut," to which he

made reference yesterday, and annexes it to his deposition and marked "William R. Whitaker, A" for identification herewith.)

I made my visit to the bakery of Baumgarden and Langles I think in September, 1872; it was after the 5th of September and certainly not later than the first week in October. On the 5th of September, 1872, I sent to Baumgarden & Langles, to their bakery, a letter of which paper herewith presented marked "W. R. Whitaker, B," as a press copy, and hereto annexed and made part hereof. it was in response to this letter that Messrs Baumgarden and Hall called upon me as I have stated yesterday. Mr. Hall was superintending the erection of the reel oven at Baumgarden and Langles'; he was so engaged when I called there.

331 The defendants in this cause reserving to themselves all exceptions taken to the testimony of Johnson, the first witness examined in this cause, and with this reservation proceeds to cross-examine this witness:

I correct my statement as to the time I visited the bakery. The examination spoken of made of the oven being constructed at defendants' bakery was made a few days before writing that letter, certainly not long before; the letter was the result of my investigation; I was at that time employed to give an opinion as to Mrs. Haughery's rights as assignee of the Ball patent, having refused to bring an action in her behalf in the matter until after full investigation; I cannot state how long before my visit that I was engaged by Mrs. Haughery to give my opinion. I had it under consideration for some time. I had informed Messrs. Baumgarden and Hall that I had been applied to by Mrs. Haughery, but that I did not propose to bring an action until I had satisfied myself that they infringing on her rights. This was previous to my visit to the bakery. I had several interviews with the gen-

332 tlemen, precisely how many I do not know, nor can I give the date. My impression is that this information was given in both writing and verbal. If it had been in writing I should very likely have kept a copy of it, and I do not find such a copy in my letter-book. When I said that my visit to the bakery was a few days before writing the letter of the 5th of September, I meant not many days, and that I could not precisely say how many. Mr. Hall conducted me through the investigation and took me over the bakery; there were a large number of employees in the building whom I saw and several of whom I questioned in reference to their various employments. I do not remember whether Mr. Baumgarden was present at this visit. I think he was, but am not positive; his men in charge of the work were present; I do not remember their names, but according to my best recollection Mr. Hall introduced me to several. I do not recollect the day of the week, but am certain it was not Sunday. It was about the time that I wrote the letter that I informed Mrs. Haughery, through her agent, Mr.

333 Winslow, that I considered she had a good case, and I went into it as solicitor, with Mr. J. R. Beckwith as my associate.

The terms of my engagement with Mrs. Haughery was a confidential matter between her and me; I have no contingent interest in this suit whatever. I charge a large fee, which I expect to collect whether I win or loose; no matter what the result of this suit is, I get my fee. My associate is employed by Mrs. Haughery. I do not recollect what time of the day it was when I visited the establishment of the defendants; can't tell whether it was in the morning or afternoon, but know it was during daylight; I must have been in the bakery about one hour or thereabouts,

and the greater portion of the time was spent at the oven and that part of the bakery. Mr. Hall was very particular and very kind in showing me the whole arrangement of the oven, and had a candle or candles brought so as I could see the interior of it. I do not remember the exact
334 location of the oven in the bakery, except that it commences on the ground or under it—there was quite an extension or foundation; I did not ascertain the dimensions of the oven; my attention was chiefly attracted to the plan of the oven, and not its size. The brick work I should think, as well as I am capable of judging, was approaching completion. The iron work, including the reel and shaft, were not in complete order, but a portion at least was set up in its place; if my memory serves me, the shaft was in position and a considerable number of the connecting rods, connecting the eccentric with the bread-holders; enough was set up of the reel to enable Mr. Hall to show me readily as it was intended to work. Do not consider myself a practical mechanical engineer or machinist. I have given some attention to the modes adopted in supplying heat to bake-ovens.

Q. In your understanding of the theory of the action of the heat, do you adopt the theory, Newton's and Leibnitz, known as the molecular theory, or do you consider the modern theory of Professor Tyndall, Rumford, and others, known as thermodynamic theory, as a proper
335 explanation of the phenomenon resulting from the action of the heat?

I have read with some attention Professor Tyndall's later lectures on this subject and have some acquaintance, which I derived at school and since, with a theory advanced as the molecular theory, and though I don't consider myself scientist enough to decide between such distinguished authorities, Professor Tyndall's arguments seemed tolerably convincing—his arguments and illustrations. When speaking of Tyndall's lectures, I have reference to those that he delivered in New York a few months since, and to numerous articles and reviews on and abstracts of his prior publications.

Q. When you examined the oven did you examine it for the purpose of ascertaining whether it could be used for the purpose of heating the oven either by direct heat or radiated heat or reflected heat?

Ans. I did.

Q. Please state the result of your observation?

A. The oven constructing was so making as to allow direct heat
336 to pass from the fire with the products of combustion into and through the reel chambers; when the oven was in operation undoubtedly heat would be reflected or radiated from every substance subjected to the action of the direct heat, that is to say, from the walls, the top, and the iron works, but I should regard such reflection or radiation as a necessary incident to the operation of baking in that oven by the use of direct heat.

Q. Could not the oven in the condition which you saw it have been so changed before it was put in operation that radiated heat could be used alone to the exclusion of the direct heat?

A. Not without an alteration of the flues as they were then arranged, because they were so situated as to compel a draught through the reel chamber; the floor of the oven was so arranged, as shown by Mr. Hall's wood-cut attached to my deposition, that the flames passed over a sort of open box or space between the fire-box and the rear lower flue, into which would drop cinders and ashes, and which was intended for that purpose; above the flame so passing over there was no covering of any kind between that and the reel-chamber; a tight cover over

337 the floor of the oven would deprive the fire of draught, and I have no doubt, if proper draught could be furnished under it to keep up a fire, that will bake bread in that oven, unless such cover were made of some not yet discovered and undestructable material, it would burn out; it would not work in that oven without vents through it. I give these opinions without professing to be an expert in such matters; they are merely my judgment upon it.

In my opinion the oven in the condition in which I saw it could not have been so changed before it was put in operation that radiated heat could be used alone to the exclusion of the direct heat, without what would amount to a reconstruction of the oven; I have never seen the oven referred to in operation; I never asked the question what kind of fuel was intended to be used in that oven as then constructed; possibly wood as well as coke might have been used in that oven as then constructed. I should think that wood would produce too much smoke and flame and dirt, and therefore I would think coke preferable.

338 Q. Do you know what are the component parts of coke, analytically considered?

Ans. No, sir.

Q. You are not acquainted, then, practically with the manner of making bread?

A. I have had as many opportunities to observe the process of making bread as I have had of observing almost any other chemical process, and consider myself practically acquainted with the manner of making bread.

Q. Did you ever make and bake a loaf of bread in your life?

A. I have made and baked wheat and corn bread often.

Q. You have never been employed in a bakery as a baker?

A. No, sir.

Here witness desires to make the following explanation:

My memory does not serve me well enough to be positive in my testimony with reference to dates; on that subject I have testified to the best of my recollection.

(Signed) WM. R. WHITAKER.

Sworn to and subscribed before me this 26th day of August, 1873.

[L. S.] (Signed) D. URBAN,
U. S. Com'r & Special Examiner.

339 When, for want of time, the further taking of testimony in this case was continued till to-morrow, Wednesday, August 27th, 1873, at 11 o'clock a. m.

WEDNESDAY, *August 27th*, 1873.

Pursuant to adjournment, the further taking of testimony in this case was resumed, *and* a witness on behalf of complainants appearing.

Present, J. R. Beckwith, esq., and William R. Whitaker, esq., on behalf of complainants.

Present, G. Schmidt, esq., on part of the defendants.

Deposition of TONY ADAMS, a witness on behalf of complainants, of lawful age and sound mind, who, being first duly sworn to tell the truth, the whole truth, and nothing but the truth, deposes and says:

(Here Mr. G. Schmidt, counsel for the defendants, objects to the examination of this witness on the same ground as to that set forth in the exception of the witness Johnson.)

Being examined by Messrs. J. R. BECKWITH and WM. R. WHITAKER, of counsel for complainants, the witness says:

My name is Anthony Adams; my age is 26 years; my occu-
340 pation is that of a baker; my residence is in this city; I am employed at the bakery of Messrs. Baumgarden and Langles, in this city; I have been employed there about eleven months; I am dough-mixer at the said bakery; whilst so employed I have had opportunities to look at the new reel-oven in the said bakery and have looked at it; part of the dough which I mix goes into the reel-oven; I have taken pains to see how that reel-oven works; I have examined the reel oven about one month ago; when I examined the reel-oven I found the fires to be below the reel.

Here witness, being shown the model marked C, was asked:

Q. Did the fuel come under the reel as it is shown by the fire-box in this model?

A. Not exactly; it was not dead open to the reel as that is, but that there was a small space, about 6 inches wide, where I could see the flame looking through the hole where the bread is put in and taken out, and looking down through the reel to the fire I did not make any particular ob-
servation as to where the draught went. It is not my business to at-
341 tend to working of the oven. It was some time in the middle of last May that there was a change made in the oven. It was in June or the last of June when they finished these changes; I can't speak positively as to the dates. I have been engaged at the bakery most of the time since these changes have been completed. I do not know how long it takes for that oven to cool so as to enable the workingmen to get into it. The oven has been running all the while, while I worked there, since June. I have never been off work at that place since June more than three days at a time. To my knowledge there has been no changes made in that oven since June. In any such changes had been going on since June, I would likely have seen them at work there. When I made the examination of the oven I made it at the request of W. R. Whitaker. Mr. Whitaker asked me to see if I could not see the fire from the furnace by looking down through the reel chamber.

Defendant's counsel cross-examines under the reserve already
342 taken to the previous witness.

I was first employed by Messrs. Baumgarden and Langles on the 29th day of September last. When I first came there to work they had torn down the old oven and were rebuilding a new oven. I have been employed in the baking business ever since I was 9 years old. While working in the baking business I have been engaged in cross-rolling, breaking dough, at the oven, etc. I have always been employed as a simple laborer in the baking business. I know something about machinery, as I worked in a machine-shop for six months. I have never worked in any bakery in which there was a reel oven until employed by Messrs. Baumgarden and Langles. When I was first employed by Messrs. Baumgarden and Langles I was employed by them first as a roustabout, then as a dough breaker, and then as a dough mixer; a dough mixer gets better pay than a roustabout and dough breaker. I examined this oven about one month ago. It was the first
time that I paid so much attention to it; I examined it at twelve
343 o'clock, at noon; the oven was then in operation; they were baking then soda crackers. I was engaged in looking at the oven for about a half hour while she was reeling. I looked through the aperture where they introduce the dough in the form of biscuits to be

baked, and where they take out the biscuits after baked, the same as is shown in the iron model of defendant's marked "A" No. 1, and which aperture is designated by the letter X. I have never been inside of that oven while not at work. I have looked good at the reel, so as in case if they would put me to work at it that I would know it. I do not know by what means and by what power the reel is put in motion. I do not know how the flues are; I never paid any attention to it. There is a damper on the top where they let out the heat and smoke as confine it, to which is attached a chain which operates on the side, but do not know where the damper is located.

Q. Did ever anybody call upon you to inquire what testimony you could give in this cause?

A. Mr. Harris.

344 Q. From whom did he say he came?

A. He said he came from Mr. Langles.

Q. Did he make you any promises and say whether he would give you any money?

A. He told me that he would give me twenty dollars. I told him that I did not care about it, and then he told me he would give me forty; this was about the 1st of last May; he came back again the Tuesday following, accompanied by Mr. Urban, who told me he was a U. S. commissioner. These gentlemen took a seat for a few moments, and then walked out and stayed away about ten minutes and took a seat again; then Mr. Harris asked me the same questions that he had asked me the Sunday before, and Mr. Urban read to me a paper which was already written, when Mr. Urban told me anything that was read out by him which was not correct to answer yes or no. After Mr. Urban had read the paper to me then I went back in the room and reflected what Harris had said, and inasmuch as Mr. Harris had said that he came from Mr. Langles, my wife told me to sign it and

345 let the go, and I did sign it.

It was about or between seven and eight o'clock when I signed that paper. I came home about half after seven o'clock and they remained at my house about three quarters of an hour. I can't read nor write. I do not what the paper which I signed contained. Mr. Harris was working in the custom-house, as he told me then; when he first came he told me that there was a bakery to be constructed up town and that they wanted to construct a reel oven, the same as is in the bakery of Messrs. Baumgarden and Langles; he told me that I might get employment there; when Mr. Harris came the second time he did not speak anything about that. I know that there was something the matter with the oven at Baumgarden and Langles, but what it was I do not know; I never paid any attention to it. After I signed the paper presented to me by the United States commissioner, Urban, Mr. Harris requested me to call at the office of Mr. Whitaker, and I did go to his office. When I got to the office of Mr.

346 Whitaker, he, Mr. Whitaker, asked me whether the paper which I had signed was true. I told him it was; he did not read the evidence to me; that was all that passed between us; I was about ten minutes in his office.

Redirect by counsel for complainants:

They do not allow any outsiders to visit the reel oven of Messrs. Baumgarden and Langles, and have not for two or three months.

Here witness desires to correct his statement as to his age, as follows:

That he does not know of his own knowledge what his age is, he only speaking from hearsay when giving his age as 26 years.

his
ANTHONY × ADAMS.
mark.

Sworn to and subscribed before me this 27th day of August, 1873.
[L. S.] (Signed) D. URBAN,
U. S. Com'r & Special Examiner.

Deposition of BERNARD KLOTZ, a witness on behalf of complainants, of lawful age and sound mind, who being first duly sworn to tell
347 the truth, the whole truth, and nothing but the truth, deposes and says:

(Here Mr. G. Schmidt, counsel for the defendants, objects to the examination of this witness on the same ground as to that set forth in the exception of the witness Johnson.)

My name is Bernard Klotz; my age is 29 years; my occupation is that of a baker; my residence is in the city of New Orleans; I have been employed as a baker ever since the year 1854; I am at present employed at Margaret Haughery as superintendent of her bakery; Mrs. Haughery has a reel oven in her bakery; I understand thoroughly how the reel oven works; there is a furnace where the fire is put in; the furnace is at the bottom; the heat gets into the reel chamber through side flues and back flues over the arch; the arch is over the furnace, with holes in the arch.

Witness being shown complainants certified model A, says that it substantially represents the reel oven now in operation at Mrs. Haughery's bakery in New Orleans.

In that oven, however, the furnace opens on the front, not on the end or side the heat passes directly into the oven or reel chamber;
348 through flues connected with the fire-box, and passes out at the top and sides through another system of flues and dampers at the top; I have examined a reel oven at Messrs. Baumgarden and Langles'; the oven was not finished when I saw it; they were putting in the iron work; I paid attention to its mode of construction.

Here witness, being shown certified model marked D, says:

That they were putting in McKenzie's reel; I can't see any difference, for this reel in certified model D is exactly the same as the one shown to me there by Mr. Hall—I mean Mr. Hall who put up Messrs. Baumgarden and Langles' oven.

Here witness is shown certified model marked C, and says:

That the oven building at Baumgarden and Langles', to which I have referred, excepting the reel, was similar in construction to this model, except that there was a turn or arch over the top. I did not notice how the fire-box was situated in the reel oven of Baumgarden and Langles in reference to the reel chamber; the furnace was not completed
349 when I looked at it. I saw a place left for a furnace there; this place was situated below the reel chamber, right in front of the oven. All I observed about flues to carry off the heat, smoke, etc., was a chimney with a damper situated right over the arch exactly like that in certified model D.

Q. State how the chimney draught and damper at the top of Mrs. Haughery's reel oven correspond with the chimney draught and damper at the top of Messrs. Baumgarden and Langles' reel oven.

A. The damper and chimney of Mrs. Margaret Haughery's is used to retain or let out heat, and the damper of Messrs. Baumgarden and

Langles' oven that I saw was for the same purpose; it was shown to me by Mr. Hall; he worked it so that I could see how it worked; the only difference there was, the chimney did not run up in the same part of the crown as the reel oven of Mrs. Haughery's.

Q. Who was superintending the construction of that oven?

A. Mr. Hall.

Q. Did Mr. Hall explain to you the working of the oven?

A. Yes, sir.

350 Q. Did Mr. Hall explain to you how the heat was to be applied to bread in the process of baking when the oven was in use?

(Counsel for defendants objects to any declarations from Mr. Hall as being mere hearsay, and because they cannot legally effect any right of Messrs. Baumgarden and Langles, as likewise because Hall has had no notice of the testimony, which is consequently illegal and irrelevant as to him.)

A. He said that it would give a direct heat.

(It is understood the exceptions heretofore reserved in the taking of the testimony to be taken in this cause on behalf of complainants.)

I am still in the employ of Mrs. Margaret Haughery; I can't exactly say what time, what day, or what month even, it was when I examine the oven of Messrs. Baumgarden and Langles, but I can find out the time exactly, at least the week or month. It was during the time that Mr. Hall was building it; I have not seen the oven since it was completed.

Redirect by Mr. J. R. BECKWITH:

Q. Have you ever applied to Messrs. Baumgarden and Langles
351 for permission to see the oven since?

A. I asked Mr. Baumgarden, and he told me that he would not object but his partner would, and therefore I did not go

Recross by G. SCHMIDT:

Q. When did you make the application, and where?

A. I can't exactly state the time; the application was made in the bakery of Mrs. Haughery, in the city of New Orleans. I have never applied to Mr. Langles for permission to see the oven. This was, I think, in the early part of the summer, but I can't say.

(Signed) BERNARD KLOTZ.

Sworn to and subscribed before me this 27th day of August, 1873.

(Signed) D. URBAN,
U. S. Com'r & Special Examiner.

When, for want of time, the further taking of testimony in this case was continued till to-morrow, Thursday, August 28, 1873, at 11 o'clock a. m.

THURSDAY, *August 28th*, 1873.

Pursuant to adjournment the further taking of testimony in this cause was resumed, and a witness on behalf of the complainants appearing.

Present, J. R. Beckwith and W. R. Whitaker, on behalf of the complainants.

352 Present, G. Schmidt, esq., on behalf of defendants.

Mr. W. R. Whitaker, of counsel for complainants, here stated that he was too indisposed to proceed with the testimony in this cause to-day; whereupon, by consent of counsel, the further taking of testimony in this cause was continued till Monday, September 1st, 1873, at 11 o'clock a. m.

MONDAY, *September the 1st*, 1873.

Pursuant to adjournment the further taking of testimony in this case was resumed, and a witness on behalf of the complainants appearing.

Present, G. Schmidt, esq., on behalf of defendants. Absent, J. R. Beckwith and W. R. Whitaker, on behalf of complainants.

When, on account of the absence of the counsel on behalf of complainants, the further taking of testimony in this case was continued till to-morrow, Tuesday, September 2d, 1873, at 11 o'clock a. m.

TUESDAY, *September 2d*, 1873.

Pursuant to adjournment the further taking of testimony in this case was resumed, and the witness, JAMES HENRY, appearing.

Present, Messrs. J. R. Beckwith and W. R. Whitaker, on behalf of the complainants.

353 Present, G. Schmidt on behalf of the defendants.

When, by the consent of counsel, the further taking of testimony in this case was continued till to-morrow, Wednesday, September 3d, 1873, at 11 o'clock a. m.

WEDNESDAY, *September 3d*, 1873.

Pursuant to adjournment the further taking of testimony in this cause was resumed.

Present, J. R. Beckwith, esq., on behalf of the complainants.

Present, G. Schmidt, esq., on part of defendants.

1st. Here counsel for complainants offers in evidence a certified copy of a United States patent issued to H. Ball for improvement in bake-ovens, dated September the 23d, 1856, No. 15753, and marked No. 9 for identification herewith.

2d. Also a certified copy of the United States letters patent issued to Hosea Ball for new and useful improvements in ovens, dated October 12th, 1869, No. 3666, being a reissue, and marked No. 4 for identification herewith.

(Here counsel for defendants objects to the introduction in evidence of patent No. 3666, because it introduces new matter not shown,
354 suggested, or indicated in the specification, drawing, or model filed with the original application, and also because the claim it contains is broader than the invention, and apparently made for the purpose of covering the claims of all subsequent inventors and patentees.)

3d. Also a certified copy of the reissued letters-patent and certificate of extension granted to Hosea Ball June 14th, 1870, No. 4026, for ovens, and marked No. 5 for identification herewith.

(Counsel for the defendants objects to the admissibility of the above patent, No. 4026, purporting to be a reissue of the patent dated September 23d 1856, on the ground that the reissue is not for the same invention as that described, claimed, and shown in the said original letters patent of September 23d, 1856.)

4th. Also a certified copy of the records of the United States Patent Office in the matter of the application of Hosea Ball for the extension of letters patent for improvements in ovens, granted September 23d, 1856, and marked No. 6 for identification herewith.

(Counsel for defendants objects to the proceedings and opinions contained in said document, on the ground that the proceedings
355 had the extension granted and not in conformity with the rules and requirements of the law, and the proceedings of the Patent

Office in like cases had and sanctioned by judicial decisions, which will be presented in due time.)

5th. Also articles of agreement and assignment made on the 22d day of March, 1869, between Hosea Ball and Mrs. Margaret Haughery, with the acknowledgment and certificate attached, marked No. 2 for identification herewith.

6th. Also a copy of United States letters patent No. 108258, issued to James Hall October 11th, 1870, for improvement in revolving reel bake-oven, and marked No. 8 for identification herewith.

(Counsel for defendants objects to the introduction *to* the above document marked No. 8, as not being responsive to or calculated to establish any of the allegations in complainants' bill, or as in any way properly connected with the present injury.)

7th. Also a copy of United States letters patent No. 115626, issued June 6th, 1871, to Duncan McKenzie for improvement in ovens, and marked No. 7 for identification herewith.

(Counsel for defendants objects to the introduction of patent
356 No. 115626, and marked No. 7, as not tending to support any allegation in complainants' bill of complaint, and as having had no previous notice of complainants' intentions to introduce said patent, and the motives for his doing so not having been explained to the defendants, and further that said patent is not certified as the law requires.)

8th. Also a certified copy of the model in the matter of letters patent granted Hosea Ball, dated September 23d, 1856, No. 15753, reissued October 12th, 1869; No. 3666, reissued June 14th, 1870, No. 4026, for improvement in bake-oven, marked B for identification herewith.

(Counsel for defendants objects to the introduction in evidence of the preceding model on the grounds and for the reasons by them alleged to the introduction of the patents marked No. 3666 and 4026, and as dependent entirely on the question whether the reissue was in due form, and whether either of said patents cover a different invention from that described in the original letters patent dated September 23d, 1856.)

9th. Also a certified duplicate of the model in the matter of the letters patent granted to Hosea Ball July 19th, 1870, No. 105541,
357 for oven, and marked A for identification herewith.

(Counsel for defendants objects to the introduction of the above model on the ground, first, that as yet there is no evidence that a patent, which it is said to represent, is now in existence, and secondly, because it appears to be a model of an invention different from that described, claimed, and patented on the 23d of September, 1856.)

10th. Also a certified duplicate of the model in the matter of the letters patent granted to James Hall, dated October 11th, 1870, No. 108258, for bake oven, and marked C for identification herewith.

(Counsel for defendants objects to the introduction of the above model on the ground that there is no issue in this cause authorizing the introduction of a similar model, and also because they, the defendants, do not claim to have an oven similar or in imitation to the patent granted said Hall.)

11th. Also a certified duplicate of a model in the matter of the letters patent granted Duncan McKenzie, dated June 6th, 1871, and
358 No. 115626, for bake-oven, and marked D for identification herewith.

(Counsel for defendants objects to the introduction of the above model as not admissible under any issue made in this cause, and also because defendants do not rely on or pretend that the oven used by them is con-

structed on the model or in imitation of the oven patented by the said McKenzie.)

12th. Also the affidavit of Samuel Brock, deceased, filed in this cause on the hearing of the motion for injunction herein June 13, 1873, marked No. 3 for identification herewith.

J. R. BECKWITH, being duly sworn, deposes and says as follows:

That Samuel Brock, the affiant in the above-described affidavit, made and subscribed by him on the 15th day of May, 1873, before J. W. Gurley, a United States commissioner, is dead; that he died at New Orleans a few days after making the affidavit, I believe about the 25th day of May, 1873; that I was present by his bed while he was dying, and was present at his funeral and saw him buried.

(Signed) J. R. BECKWITH.

(Counsel for defendants objects to the testimony of Mr. Beckwith, on the ground that it is not the best evidence of which this cause
359 admits, and also because he is the counsel for the complainants in this cause. Counsel for defendants objects to the admission of the affidavit of Samuel Brock, first, because it is hearsay evidence; second, because there is no evidence that Brock is, as he represents himself, an expert in matters of patent inventions; thirdly, because non constat but that the testimony might have been taken contradictorily with the defendants' prior to the demise of said Brock if complainants had so desired; and fourthly, because it states facts not at issue nor in the present case, and refers to models not properly identified so as to enable the defendants to ascertain the true meaning of the affidavit.)

13th. Also a certified copy of bill, answer, replication, and decree in the case of Hosea Ball, complainant, against Thomas R. Harris, defendant, heard and determined in the circuit court of the United States for the southern district of New York, sitting in equity, and marked No. 11 for identification herewith.

(Counsel for defendants objects to the introduction of said rec-
360 ord, first, because it is res inter alia acta, and as such not admissible in evidence without proper limitation; secondly, because the record itself shows that it is not a complete transcript of the record of the proceedings in the case of Ball vs. Harris; thirdly, because in the record of the proceedings in the record as certified by the clerk of the court there are numerous interlineations, marginal references, and erasures in important portions of the record which are not certified as approved, and hence legally renders the whole document of no value.)

14th. Also a certified copy of the bill, answer, replication, and decree in the suit of Hosea Ball against John S. Wilson, heard and determined in the circuit court of the United States for the southern district of New York, and marked No. 10 for identification herewith.

(Counsel for the defendants reserves to himself the same objection to the introduction of this record, the same objections as those taken to the introduction of the record of Ball against Harris.)

Deposition of HENRY JAMES, a witness on behalf of complain-
361 ants, of lawful age and sound mind, who, being duly sworn to tell the truth, the whole truth, deposes and says:

My name is Henry James; my age is 22 years; my occupation is that of a dough breaker; my residence in the city of New Orleans; I was last employed in the business of a baker at Messrs. Baumgarden and

Langles, on Fulton street in this city; I left the bakery of Messrs. Baumgarden and Langles Sunday morning last, the 31st of August, 1873; I was not discharged; I had been working at their bakery for nearly two years, I cannot fix the exact time; I was first employed as a packer in the bakery, and afterwards was put to breaking dough; I received higher wages at breaking dough than I did as a packer; the time I left the bakery I had been working at dough breaking; I have had a chance to see the oven in that bakery; I saw a reel oven; I have looked into the inside of the reel oven; I looked into the reel oven from the place where the' put in the dough and take out the bread, and where they fire up; the oven referred to has been at work; when
362 I looked at the inside of the oven, through the place where they put in the bread, I did not see anything; I saw the reel revolving there; I did not see any fire in the furnace through that hole.

Q. What time was it when you looked through the oven as testified?

A. I do not remember what time it was.

Q. About how long ago do you think it was? State either in weeks or months.

A. It has been about one month and a half, to my knowledge.

Q. Did you ever look into that oven at any other time?

A. I have not.

Q. Do you know where the draught of the fire goes into that oven?

A. It leads off into the side flues into the chimney.

Q. Do you know where the flues are?

A. The flues are in the side and lead off into the chimney from the damper.

Q. Where is the damper, and is there more than one?

A. There is only one damper; it is on the right-hand side of the oven in front.

Q. Does that damper open down into the chamber where the reel is?

A. It answers for that purpose, the chamber where the reel is.

363 Q. Does that damper let the heat out of the oven or stop it from going out?

A. It lets it out and stops it from going out.

Q. Is it possible for the heat to get out of that oven or the draught without going through the chamber where the reel is?

A. It has to go through the chamber first.

Q. Has there been any change made in that oven since you knew it; and, if so, how long ago was the last change made?

A. There has been a change made by—I cannot remember how long ago it was made.

Q. What was the change? What did they do to the oven?

A. The fire-chamber was altered and sheet-iron was put inside.

Q. Did they put any sheet-iron over the floor of the oven above the fire?

(Counsel for defendants objects to the question as being leading, requiring only an answer of yes or no.)

A. I don't remember them putting any sheet-iron on the floor of the oven above the fire, but they put some brick work.

Q. About how long ago was it when the brick work was done?

A. To the best of my recollection it was in June last.

364 Cross-examined by counsel for defendants:

I am certain that I was employed by Messrs. Baumgarden and Langles, as packer, I believe for one month, and was from there removed to breaking dough; I was employed as packer the year before last; I do

not recollect in what month I was first engaged; it was after New Year's that I was engaged; as dough breaker or packer, I had nothing to do with the oven, but I sometimes looked into it; I can't remember the time when the reel-oven was first built, it was built in the summer season; I can't remember what year it was built; whether it was this year or last year; it was not built when I was first engaged there; I can't tell how long after I was employed there that they built the reel-oven; they were employed in building the reel-oven one month; I don't know who built the oven; the boss man's name was Hall; I know that the oven which Mr. Hall built was afterwards taken down and rebuilt; I can't tell at what time the oven was taken down and rebuilt; I can't tell how long ago it was that the oven was built and rebuilt; I
365 can't even approximate the time; I have never been inside of the oven after it was built; when I examined the oven, I did so at the request of Mr. W. R. Whitaker.

I have never informed Mr. Langles or Mr. Baumgarden that I had been requested to examine the oven by Mr. Whitaker, one of the solicitors for complainants. I have been spoken to by a Mr. Harris in relation to examining the oven. I only know Mr. Harris by sight. I do not know what he does; he has never made me any promises at all. Mr. Harris told me he was working the case for Mr. Langles' brother. He did not ask me to examine the oven for them. He said he was working the case up for the two brothers. It has been about three months ago; when Mr. Harris told me this Mr. Whitaker had called upon me at Commercial alley. I do not live in Commercial alley. I went there because somebody told me that Mr. Whitaker wanted to see me there. It was Charles Adams told me. Mr. Charles Adams is a colored man, and works up town. My testimony was taken in writing about two months
366 ago by D. Urban, a United States commissioner, who came up to my house to take it, which is on Franklin street in this city; it was taken between 7 and 8 o'clock in the evening; the commissioner swore me. I never told Messrs. Baumgarden and Langles, or either, that I had been so examined. I have left the employment of Messrs. Baumgarden and Langles last Sunday morning; I left them because they only pay on Sunday mornings, and I do not like to go on a Sunday to get paid off. I have been in their employ for about two years, and during that time they would pay off sometimes on a Saturday evening and sometimes on a Sunday morning; Baumgarden and Langles pay their hands regularly weekly. I am not doing anything at present. I have no other trade to follow in the city but that of baker. I have no promise of any work now; Mr. Harris never promised me any employment. I know Mrs. Margaret Haughery. I saw her the week before last as I was coming from work. I had no conversation with her, nor with Mr.
367 Klotz, her foreman, nor with Mr. Winslow.

Q. Have you ever told any one that you could get good employment, or would be well paid, if you could prove that Baumgarden & Langles used the same patent oven as Mrs. Margaret Haughery?

A. No, sir.

Redirect by counsel for complainants:

While I was employed at Baumgarden and Langles' my usual time of leaving work was at 6 o'clock in the evening; the day I gave my affidavit before D. Urban, U. S. commissioner, I had left my work at four o'clock that evening.

(Signed) JAMES HENRY.

Sworn to and subscribed before me this 3d day of September, 1873.
[L. S.] (Signed) D. URBAN,
U. S. Comm'r & Special Examiner.

When, for want of time, the further taking of testimony in this cause was continued till Friday, September 5th, 1873, at 11 o'clock a. m.

FRIDAY, *September 5th*, 1873.

368 Pursuant to adjournment, the further taking of testimony in this cause was resumed and no witnesses appearing.

Present, J. R. Beckwith, esq., and W. R. Whitaker, esq., on behalf of complainants.

Present, G. Schmidt, esq., on behalf of defendants.

When, for the non-appearance of the witnesses and by consent of counsel, the further taking of testimony in this case was continued till Monday, September 8th, 1873, at 11 o'clock a. m.

MONDAY, *September 8th*, 1873.

Pursuant to adjournment, the further taking of testimony in this case was resumed and no witnesses appearing.

Present, Messrs. Whitaker & Beckwith, on behalf of complainants.

Absent, G. Schmidt, esq., on behalf of defendants.

When, on account of the witness of Mr. G. Schmidt, of counsel for defendants, the further taking of testimony in this case was continued indefinitely.

On this 31st day of March, 1875, appeared Messrs. J. R. Beckwith and Wm. R. Whitaker, solicitors for complainants, who declared that
369 they do now close the testimony taken in this case.
[L. S.] (Signed) D. URBAN,
U. S. Comm'r & Special Examiner.

UNITED STATES OF AMERICA:

Circuit court of the United States, district of Louisiana.

I, the undersigned commissioner, duly commissioned and qualified in and for the district aforesaid, do hereby certify that I caused notices to be served upon E. C. Billings and Gustavus Schmidt, attorneys for defendants herein, and on Messrs. Baumgarden and Langles, that I would proceed with the examination of witnesses on behalf of complainants in the above and aforementioned suit, at my office, No. 58 Camp street, in the city of New Orleans, on the 23d day of August, 1873, at 12 o'clock m., as will more fully show by the annexed notice and U. S. marshal's notice.

And I further certify that I caused the above-mentioned Anthony Adams, J. F. Johnson, and others, witnesses on behalf of complainants herein, and deponents in the foregoing depositions, to come before
370 me at the time and place therein mentioned; that said deponents were by me first duly sworn to tell the truth, the whole truth, and nothing but the truth; that said depositions were reduced to writing by my clerk in my presence, and that of the witnesses and counsel for complainants and defendants, and were carefully read over to said deponents before being signed by them; and deponents then and there in my presence subscribed the same; and I further certify that I have no interest, direct or indirect, in the suit to which the foregoing depositions

relate, and am not the agent or attorney for any person having any interest therein.

Witness my hand and seal at New Orleans this thirty-first day of March, 1875.

[L. S.] (Signed) D. URBAN,
U. S. Comm'r & Special Examiner.

Documents attached to depositions.

Circuit court of the United States for the district of Louisiana. In equity.

HOSEA BALL ET ALS. vs. JAMES HALL ET ALS. } No. 6811.

DISTRICT OF LOUISIANA, *ss:*

J. R. Beckwith, being duly sworn, deposeth and saith that he
371 served the notice hereto attached on G. Schmidt, one of the solicitors for complainant, by delivering to him a duplicate thereof on the 5th day of August, A. D. 1873, at the city of New Orleans.

(Signed) J. R. BECKWITH.

Sworn to and subscribed before me this 5th August, 1873.

(Signed) F. A. WOOLFLEY,
U. S. Comm'r.

Circuit court of the United States, district of Louisiana. In equity.

HOSEA BALL ET ALS. vs. JAMES HALL ET ALS. } No. 6811.

T. SCHMIDT & E. C. BILLINGS, Esq'r's:

GENTLEMEN: Please take notice that the complainant in this cause desires that the evidence to be adduced in this cause from witnesses residing within the jurisdiction of this court, in all cases where a commission is not necessary to obtain the evidence, shall be taken orally.

This notice is given in compliance with the conditions and provisions of the 67th rule in equity as amended.

372 Very respectfully,

(Signed) J. R. BECKWITH &
WM. R. WHITAKER,
Solicitor' for Compl'ts.

Dated Aug. 5th, 1873.

(Endorsed:) No. 6811. Circuit court of the United States. Hosea Ball et al. vs. James Hall et als. Notice to def'ts. Filed Aug. 5th, 1873. (Signed) F. A. Woolfley, clerk.

DISTRICT OF LOUISIANA:

HOSEA BALL ET ALS. vs. JAMES HALL ET ALS. } No. 6811. In equity.

By virtue of the authority vested in me by the order of his honor

Wm. B. Woods, presiding judge of said court, I do hereby name D. Urban, esqr., a commissioner of this court, commissioner to take the testimony in the above-entitled suit.

Done at New Orleans, this 18th day of August, 1873.

(Signed) F. A. WOOLFLEY, *Clerk.*

CLERK'S OFFICE.

A true copy of the original on file in this office.
New Orleans, August 21, 1873.
[L. S.] (Signed) F. B. VINOT,
D'y Clerk.

373 UNITED STATES OF AMERICA:

Circuit court of the United States, district of Louisiana. In equity.

HOSEA BALL ET ALS. *vs.* JAMES HALL ET ALS. } No. 6811.

The President of the United States to the marshal of the district of Louisiana to execute and return:

To E. C. Billings, Gustavus Schmidt. N. A. Baumgarden, and Justin Langles, greeting:

You and every one of you will please take notice that the complainants in the above cause desire the evidence to be adduced therein to be taken orally under the 67th rule of the Supreme Court as amended; and you and every one of you will further take notice that by an order made in said cause by me, D. Urban, special commissioner and examiner of said court, the examination of witnesses on the part of the said complainants will take place before me, the said examiner and special commissioner, at my office, No. 58 Camp street, in the city of New Orleans, on the 23d day of August, 1873, at 12 o'clock m., and proceed as the said special commissioner and examiner may direct.

New Orleans, August 21st, 1873.
[L. S.] (Signed) D. URBAN,
Sp'l Com'r & Examiner.

374 *Marshal's return.*

Rec'd by the marshal Aug. 22, 1873, and on the same day, month, and year, served a copy of within named in the following manner: on E. C. Billings by leaving the same at his office, No. 82 Custom-House st., and on G. Schmidt p'lly, and on Justin Langles p'lly, and on N. A. Baumgarden by leaving the same in the hands of Langles, his partner.

New Orleans, Aug. 23d, 1873.
(Signed) S. W. REED,
D'y U. S. Marshal.

UNITED STATES OF AMERICA:

Circuit court of the United States, fifth judicial circuit, holding session in and for the district of Louisiana:

The President of the United States to the marshal of the district of Louisiana to execute and return:

To Smith Johnson, Tony Adams, Mr. Nelson, James Henry, Mr. Albany, and W. Winchester, greeting:

You and every one of you are hereby commanded that, all business

and excuses being laid aside, you and every one of you appear and attend before me, D. Urban, commissioner, duly appointed by the circuit court of the United States aforesaid a special commissioner and
375 authorized to examine you and each of you as witnesses on behalf of complainants in a suit in equity undetermined in said circuit court, wherein Hosea Ball et als. are complainants, and James Hall et als. are defendants, numbered 6811 on the docket of said court, at my office, No. 58 Camp street, in the city of New Orleans, on the 23d day of August, 1873, at 12 o'clock m., to answer truly all such questions as shall then and there be asked of you, and for a failure to attend you will be deemed guilty of a contempt of court, and forfeit two hundred and fifty dollars, and held liable to pay all losses and damages sustained thereby by the party or parties aggrieved.

Given under my hand and seal this 21st day of August, 1873.

[L. S.] (Signed) D. URBAN,
Sp'l Com'r & Examiner.

Marshal's return.

Received Aug. 22nd, 1873, by the U. S. marshal, and on same day, month, and year, served a copy of within summons on the within-named in the following manner: on Nelson p'lly; on Albany, Wm. Winchester, Ja's Henry, and Tony Adams by leaving the same at Baumgar-
376 den & Langles' bakery, where they work, in the hands of Justin Langles, and on Smith Johnson, by leaving the same in the hands of Mr. Harris.

New Orleans, August 23d, 1873.

(Signed) S. W. REED,
D'y U. S. Marshal.

Circuit court of the United States, district of La. In equity.

HOSEA BALL ET ALS. *vs.* JAMES HALL ET ALS. } No. 6811.

The defendants Baumgarden & Langles appear before D. Urban, esqr., styling himself special commissioner & examiner, & who, as such, has notified them of his intention of taking testimony this day on behalf of the complainants, & they respectfully protest against his doing so on the following grounds:

First. Because neither they nor their solicitors have had any notice of the appointment of said Urban & an opportunity of opposing the same as required by law and the practice of the court.

Secondly. Because if said Urban has, as he says, been appointed examiner for the purpose of taking the testimony of complainants, of which they require proof, such appointment was made at cham-
377 bers, ex parte, out of term and without notice to these defendants, and hence null and void.

The defendants, for the reasons above set forth and others apparent on the face of the proceedings, which, when required, will be fully set forth, respectfully protest against the taking of any testimony in the above cause by the said D. Urban, esq'r.

In testimony whereof they & their solicitor have signed this protest this 23d August, 1873, and they respectfully ask that it be received &

recorded by said Urban as embodying the reasons of their refusal to recognize his authority.

(Signed) BAUMGARDEN & LANGLES.
(Signed) G. SCHMIDT, *Solicitor.*

(Endorsed:) A. Referred to in within proceedings on page No. 1. New Orleans, August 23d, 1873. (Signed) D. Urban, U. S. comm'r & sp'l examiner.

SEPT. 5TH, '2.

Messrs. BAUMGARDEN & LANGLES,
Proprietors Commercial Bakery, 264 & 266 *Tchoupitoulas st., New Orleans:*

378 GENTLEMEN: In behalf of our client, Margaret Haughery, New Orleans, assignee for the States of Louisiana and Texas of the patent of Hosea Ball, reissued October 12th, 1869, No. 3666, for "a new and useful oven," we have to inform you that she believes (and we coincide in her opinion) that the new oven or ovens you are now putting up in this city are a direct infringement upon her rights as such assignee and upon said patent. We have copies of the said patent at our office, and think that an examination by you will at once convince you that our opinion respecting the infringement is correct, and we should be glad to exhibit them to you if you will call upon us. We have also a copy of Hall's patent with drawings. We are compelled to give you notice not to proceed further in the erection of the said oven or ovens, and not to use them, or our client will be compelled to take legal steps to prevent a violation of her exclusive rights and to secure the damages she will be entitled to. We shall be at our office any day from nine to ten, and from half-past two till half-past three.

Resp'y,
(Signed) CH'S S. RICE & WM. R. WHITAKER.

379 Wm. R. Whitaker, B, referred to in within testimony of Wm. R. Whitaker on page 15. New Orleans, Aug. 26th, 1873. (Signed) D. Urban, U. S. comm'r & sp'l examiner.

BAKED IN HALL'S OPEN FURNACE, REEL OVEN. PATENTED OCTOBER 11TH, 1870.

Mr. JAMES HALL:

DEAR SIR: After using your open furnace, reel oven, constantly since its construction, April, 1872, we unhesitatingly say it has given entire satisfaction, and we recommend it to bakers as an oven that will bake the most delicate confectioneries equally as well as bread and crackers.

Respectfully,

SNIDER, BRO. & CO.,
131 & 133 *Front St., Cincinnati, O.*

SPECIAL NOTICE.

The cut on the first page of this circular represents my improved reel oven, to which I desire to call your attention. It is eighteen
380 months since I received my patent, during which time my oven has been in constant use, submitted to every required test, and in every instance has far exceeded my expectations. I therefore feel

the utmost confidence in now presenting it to you for your consideration.

Messrs. Withington & Co., Aerated Bread Company, of this city, had one of McKenzie's ovens altered to mine, and after a trial of two weeks, to their entire satisfaction, had their large mammoth oven altered also. Their testimonials are attached, for which I ask a careful perusal. Their saving in fuel has been fully thirty per cent.

I also wish you to take into consideration that in adopting my oven you wholly obviate the necessity of the constant repairs that all other reel ovens are subject to.

I also append a letter from Mr. John Baillie, one of the oldest and best bakers in this city, who has tested the oven for two years in baking all kinds of material, and in every instance with success.

I have also adapted my patent with rotary ovens.

For further information address

JAMES HALL,
No. 139 East Pearl Street, Cincinnati, O.

TESTIMONIALS.

381 CINCINNATI, *March* 28, 1872.

JAMES HALL, Esq.:

DEAR SIR:. Our two reel ovens, altered by you in February last, give entire satisfaction. They are more economical than when operated under the McKenzie patent, and cost much less in construction. Doing away with the large number of small flues we consider a decided advantage, and unhesitatingly recommend them as preferable to any of the reel ovens now in use.

Respectfully yours,

G. K. WITHINGTON & CO.,
Aerated Bread and Cracker Bakers, 179 Race St.

CINCINNATI, *April 5th*, 1872.

Mr. JAMES HALL:

DEAR SIR: In answer to your inquiry, I will state that your oven has been in constant use in my bakery for near two years without any repairs, and is now likely to run for several years to come. I use from eight to ten bushels of gas coke per day of eleven hours. It has given perfect satisfaction so far, and I cheerfully recommend it to those who may be in want of an oven.

Yours, very respectfully,

JOHN BAILLIE,
Southeast corner Second and Ludlow Streets.

382 CINCINNATI, O.

JAMES HALL, Esq.:

Having substituted your open furnace in our rotary oven, we take this opportunity to say, in justice to its merits, that we find it a decided improvement, burning one-third less fuel; the heat is more uniform, and we have no knowledge of any furnace equal to yours in its adaptability to mechanical ovens.

BATCHELOR & COLLINS,
No. 43 Public Landing.

(Endorsed:) William R. Whitaker, A, referred to in within testi-

mony of Wm. R. Whitaker on page 15. New Orleans, Aug. 26th, 1873. (Signed) D. Urban, U. S. comm'r & sp'l examiner.

(Here follows diagram marked page 383.)

384 *Order appointing F. A. Woolfley comm'r to take testimony of the parties.—Entered and filed May 11th, 1875.*

U. S. circuit court.

HOSEA BALL ET ALS. vs. JAMES HALL ET ALS. } No. 6811.

On motion of G. Schmidt & E. C. Billings, solicitors of Baumgarden & Langles, defendants in the above suit, ordered that F. A. Woolfley, U. S. commissioner, be authorized to take the testimony of the parties in this suit.

Motion to suppress depositions, &c.—Filed May 22d, 1875.

Circuit court of the United States, district of Louisiana. In equity.

HOSEA BALL ET ALS. vs. HALL, BAUMGARDEN & LANGLES. } No. 6811.

Motion to suppress deposition and document.

And now come the said complainants, by J. R. Beckwith and W. R. Whitaker, their solicitors, and move the court that the following
385 alleged depositions filed in this cause be suppressed as testimony, and removed from file: 1st, the deposition of Albany Bonfiglio; 2nd, the deposition of J. J. Langles; for the reasons among others that the same are not taken by and before the examiner appointed in this cause, or by or before any standing examiner, and were and are not taken within the proper time, but too late.

And further, also the following papers and documents claimed to be evidence for defendant be also so suppressed and removed from file: 1st, a document written in the French language styled Copie du Brevet Sr. Covlet, marked Langles, and endorsed "Offered by defendant May 20th, 1875," and for the purposes of this motion marked M. T. S. 1; 2nd, seven sheets of tracing of plans or drawings attached together on a stick, and endorsed "Langles, offered by defendant May 20th, 1875," and for the purposes of this motion, marked M. T. S. 2, for the reason that there is no proof of the existence of the originals, or that the same
386 are true copies of any public document, or from any public archive; and further that the same are not offered at the proper and due time.

(Signed) J. R. BECKWITH,
Solicitor for Compl'ts.

Affidavit of Wm. R. Whitaker.—Filed December 13th, 1875.

Circuit court of the United States, district of Louisiana. In equity.

HOSEA BALL ET ALS. *vs.* JAMES HALL ET ALS. } No. 6811.

Affidavit.

Wm. R. Whitaker, being first duly sworn, deposes and says on oath, that as solicitor for complainants he prepared the bill in this case; that as filed the said bill contained the several clerical errors hereinafter set forth; that said errors were the result of mere inadvertence in writing the copy of the bill filed herein, and were and are unintentional and were not discovered by him until after the adjournment at the last term of court.

That the errors aforesaid commence in statement on line 10, page 3 of the bill as filed, which reads by mistake "that said reissued letters
387 patent covered and included certain new and useful improvements in ovens, with amended specification," &c.; that the use of the word "certain" therein was by mistake for the word "said"; that said statement was intended to read, and should read, "That said reissued letters patent covered and included said new and useful improvements in ovens, with," &c.

That in the statement commencing on line 27, page 4 of said bill, which reads "That said reissued letters patent covered and included certain new and useful improvements in ovens," the word "certain" was inserted by mistake for the word "said," on line 28 on said page 4; that said statement was intended to read and should read, "That said reissued letters patent covered and included said new and useful improvements in ovens, with amended specification," &c.

That in the statement commencing on page 5, line 21 of said bill as filed, which reads "That said renewal and extension covered and included certain new and useful improvements in ovens, with," &c., the word "certain" was again inserted by mistake and error for the word "said" on line 22, page 5 of said bill, so that the statement should
388 read "That said renewal and extension covered and included said new and useful improvements in ovens," &c.

That all of said errors in inserting the word "certain" instead of the word "said" in the stating portion of the bill escaped the notice of the solicitors for complainants until very recently.

Deponent prays the court that complainants may be allowed to amend said bill of complaint by striking out the word "certain," as erroneously used as above set forth, and that the bill be amended by inserting the word "said" in the place thereof in the three several statements above set forth.

(Signed) WM. R. WHITAKER.

Sworn to and subscribed before me this tenth day of December, 1875.

[L. S.] (Signed) CH'S S. RICE,
U. S. Com'r Dist. of La.

DISTRICT OF LOUISIANA, *ss:*

J. R. Beckwith, being first duly sworn, deposes and says that he is one of the solicitors for the complainants; that this application is not

made for purposes of vexation or delay; that the error complained of could not, was not discovered until within the last three weeks.

(Signed) J. R. BECKWITH.

389 Sworn to & subscribed before me this 18th December, 1875.

(Signed) K. LOEW,
U. S. Comm'r.

Rule to amend.—Entered and filed December 13th, 1875.

Circuit court of the United States, district of Louisiana. In equity.

HOSEA BALL ET ALS. *vs.* JAMES HALL ET ALS. } No. 6811.

Motion.

On motion of Wm. R. Whitaker and J. R. Beckwith, solicitor for complainant', it is ordered that the defendants be notified to show cause, if any they have, on the 18th instant at 11 a. m., why complainants should not have leave to amend their in this cause as set forth in the affidavit of Wm. R. Whitaker filed in this cause.

Marshal's return.

Received Dec. 14th, 1875, by the U. S. marshal, and on the 14th of Dec'r, 1875, served a copy hereof on E. C. Billings by leaving it at his office; G. Schmidt by handing it to him in person.

S. B. PACKARD,
U. S. Marshal,

(Signed) By S. W. REED,
Dy Marshal.

390 *Answer to rule for leave to answer.—Filed Dec'r 18th, 1875.*

Circuit court of the United States, district of Louisiana. In equity.

HOSEA HALL ET ALS. *vs.* JAMES HALL ET ALS. } No. 6811.

N. A. Baumgarden & Justin Langles, partners doing business under the social name of Baumgarden & Langles, come into this hon'ble court by their undersigned solicitors and answer to the rule calling upon them to shew cause why complainants should not have leave to amend their bill in this cause as set forth in the affidavit of W. R. Whitaker, one of the complainants' solicitors, filed in this cause, respectfully shewfor cause why said amendments should not be allowed:

First. That the affidavit made by said Whitaker is not in accordance with the rules prescribed when amendments are sought to be obtained in a suit like the present, after replication and the taking of depositions.

Secondly. Because the affidavit does not shew at what time the errors were discovered, which are sought to be rectified, and that they
391 could not with ordinary care and attention have been discovered and corrected before answer filed.

mony of Wm. R. Whitaker on page 15. New Orleans, Aug. 26th, 1873. (Signed) D. Urban, U. S. comm'r & sp'l examiner.

(Here follows diagram marked page 383.)

384 *Order appointing F. A. Woolfley comm'r to take testimony of the parties.—Entered and filed May 11th, 1875.*

U. S. circuit court.

HOSEA BALL ET ALS. vs. JAMES HALL ET ALS. } No. 6811.

On motion of G. Schmidt & E. C. Billings, solicitors of Baumgarden & Langles, defendants in the above suit, ordered that F. A. Woolfley, U. S. commissioner, be authorized to take the testimony of the parties in this suit.

Motion to suppress depositions, &c.—Filed May 22d, 1875.

Circuit court of the United States, district of Louisiana. In equity.

HOSEA BALL ET ALS. vs. HALL, BAUMGARDEN & LANGLES. } No. 6811.

Motion to suppress deposition and document.

And now come the said complainants, by J. R. Beckwith and W. R. Whitaker, their solicitors, and move the court that the following
385 alleged depositions filed in this cause be suppressed as testimony, and removed from file: 1st, the deposition of Albany Bonfiglio; 2nd, the deposition of J. J. Langles; for the reasons among others that the same are not taken by and before the examiner appointed in this cause, or by or before any standing examiner, and were and are not taken within the proper time, but too late.

And further, also the following papers and documents claimed to be evidence for defendant be also so suppressed and removed from file: 1st, a document written in the French language styled Copie du Brevet Sr. Covlet, marked Langles, and endorsed "Offered by defendant May 20th, 1875," and for the purposes of this motion marked M. T. S. 1; 2nd, seven sheets of tracing of plans or drawings attached together on a stick, and endorsed "Langles, offered by defendant May 20th, 1875," and for the purposes of this motion, marked M. T. S. 2, for the reason that there is no proof of the existence of the originals, or that the same
386 are true copies of any public document, or from any public archive; and further that the same are not offered at the proper and due time.

(Signed) J. R. BECKWITH,
Solicitor for Compl'ts.

Affidavit of Wm. R. Whitaker.—Filed December 13th, 1875.

Circuit court of the United States, district of Louisiana. In equity.

HOSEA BALL ET ALS. vs. JAMES HALL ET ALS. } No. 6811.

Affidavit.

Wm. R. Whitaker, being first duly sworn, deposes and says on oath, that as solicitor for complainants he prepared the bill in this case; that as filed the said bill contained the several clerical errors hereinafter set forth; that said errors were the result of mere inadvertence in writing the copy of the bill filed herein, and were and are unintentional and were not discovered by him until after the adjournment at the last term of court.

That the errors aforesaid commence in statement on line 10, page 3 of the bill as filed, which reads by mistake "that said reissued letters
387 patent covered and included certain new and useful improvements in ovens, with amended specification," &c.; that the use of the word "certain" therein was by mistake for the word "said"; that said statement was intended to read, and should read, "That said reissued letters patent covered and included said new and useful improvements in ovens, with," &c.

That in the statement commencing on line 27, page 4 of said bill, which reads "That said reissued letters patent covered and included certain new and useful improvements in ovens," the word "certain" was inserted by mistake for the word "said," on line 28 on said page 4; that said statement was intended to read and should read, "That said reissued letters patent covered and included said new and useful improvements in ovens, with amended specification," &c.

That in the statement commencing on page 5, line 21 of said bill as filed, which reads "That said renewal and extension covered and included certain new and useful improvements in ovens, with," &c., the word "certain" was again inserted by mistake and error for the word "said" on line 22, page 5 of said bill, so that the statement should
388 read "That said renewal and extension covered and included said new and useful improvements in ovens," &c.

That all of said errors in inserting the word "certain" instead of the word "said" in the stating portion of the bill escaped the notice of the solicitors for complainants until very recently.

Deponent prays the court that complainants may be allowed to amend said bill of complaint by striking out the word "certain," as erroneously used as above set forth, and that the bill be amended by inserting the word "said" in the place thereof in the three several statements above set forth.

(Signed) WM. R. WHITAKER.

Sworn to and subscribed before me this tenth day of December, 1875.

[L. S.] (Signed) CH'S S. RICE,
U. S. Com'r Dist. of La.

DISTRICT OF LOUISIANA, *ss:*

J. R. Beckwith, being first duly sworn, deposes and says that he is one of the solicitors for the complainants; that this application is not

made for purposes of vexation or delay; that the error complained of could not, was not discovered until within the last three weeks.

(Signed) J. R. BECKWITH.

389 Sworn to & subscribed before me this 18th December, 1875.

(Signed) K. LOEW,
U. S. Comm'r.

Rule to amend.—Entered and filed December 13th, 1875.

Circuit court of the United States, district of Louisiana. In equity.

HOSEA BALL ET ALS.
vs.
JAMES HALL ET ALS. } No. 6811.

Motion.

On motion of Wm. R. Whitaker and J. R. Beckwith, solicitor for complainant', it is ordered that the defendants be notified to show cause, if any they have, on the 18th instant at 11 a. m., why complainants should not have leave to amend their in this cause as set forth in the affidavit of Wm. R. Whitaker filed in this cause.

Marshal's return.

Received Dec. 14th, 1875, by the U. S. marshal, and on the 14th of Dec'r, 1875, served a copy hereof on E. C. Billings by leaving it at his office; G. Schmidt by handing it to him in person.

S. B. PACKARD,
U. S. Marshal,

(Signed) By S. W. REED,
Dy Marshal.

390 *Answer to rule for leave to answer.—Filed Dec'r 18th, 1875.*

Circuit court of the United States, district of Louisiana. In equity.

HOSEA HALL ET ALS.
vs.
JAMES HALL ET ALS. } No. 6811.

N. A. Baumgarden & Justin Langles, partners doing business under the social name of Baumgarden & Langles, come into this hon'ble court by their undersigned solicitors and answer to the rule calling upon them to shew cause why complainants should not have leave to amend their bill in this cause as set forth in the affidavit of W. R. Whitaker, one of the complainants' solicitors, filed in this cause, respectfully shewfor cause why said amendments should not be allowed:

First. That the affidavit made by said Whitaker is not in accordance with the rules prescribed when amendments are sought to be obtained in a suit like the present, after replication and the taking of depositions.

Secondly. Because the affidavit does not shew at what time the errors were discovered, which are sought to be rectified, and that they
391 could not with ordinary care and attention have been discovered and corrected before answer filed.

Thirdly. Because these defendants have not been furnished with a copy of the bill with suitable references to the places where the amendments are to be inserted, &

Fourthly. Because after replication & the taking of testimony no such amendments as complainants propose can be introduced into the bill. (Story, Equity Pleadings, §§ 332, 887; 6 McLean, 382.)

(Signed) G. SCHMIDT,
Solicitor.

Order to amend bill.

November term, 1875.

NEW ORLEANS,
Saturday, December 18, 1875.

Court met pursuant to adjournment.
Present, his honor W'm B. Woods, circuit judge.

HOSEA BALL ET ALS. *vs.* JAMES HALL ET ALS. } No. 6811.

The rule to amend the bill was called, and, after hearing argument on both sides, it is ordered that complainants have leave to file an amended bill, upon furnishing to the defendants a copy thereof and paying
392 costs of same, and upon fixing the cause for trial at an early day.

Order cause fixed for trial.—Extract from minutes of 23d March, 1877.

HOSEA BALL ET ALS. *vs.* JAMES HALL ET ALS. } No. 6811.

On motion of J. R. Beckwith, solicitor for the complainants, it is ordered that this cause be fixed for trial on Tuesday, 3d day of April, 1877, at 11 o'clock a. m., and that the defendants be notified thereof.

Hearing & continuance of cause.—Extract from minutes of 3d April, 1877.

HOSEA BALL ET ALS. *vs.* JAMES HALL ET ALS. } No. 6811.

This cause came on to be heard on the bill, answer, amended answer, replications, proofs, and exhibits. J. R. Beckwith for complainants, G. Schmidt for defendants. And after hearing argument in part, the cause is continued till to-morrow at 11 a. m.

(Here follow 7 diagrams marked pages 393 to 399.)

400 *Letters patent granted Hosea Ball, September 23d*, 1856.—*Offered in evidence by defendants April 3d*, 1877.

65.

The U. S. Patent Office to all persons to whom these presents shall come greeting:

This is to certify that the annexed is a true copy from the records of

this office of the letters patent granted Hosea Ball, dated September 23d, 1856, No. 15753, for imp't in ovens.

In testimony whereof, I, Ellis Spear, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this fifth day of August, in the year of our Lord one thousand eight hundred and seventy-five and of the Independence of the United States the one hundredth.

{ SEAL PATENT OFFICE. } (Signed) ELLIS SPEAR,
Acting Commissioner.

The United States of America to all to whom these letters patent shall come:

Whereas Hosea Ball, of New York, N. Y., has allege' that he has invented a new and useful improvement in ovens which he states
401 has not been known or used before his application; has made oath that he is a citizen of the United States; that he does verily believe that he is the original and first inventor or discoverer of the said improvement, and that the same hath not, to the best of his knowledge and belief, been previously known or used; has paid into the Treasury of the United States the sum of thirty dollars, and presented a petition to the Commissioner of Patents, signifying a desire of obtaining an exclusive property in the said improvement and praying that a patent may be granted for that purpose:

These are, therefore, to grant, according to law, to the said Hosea Ball, his heirs, administrators, or assigns, for the term of fourteen years from the twenty-third day of September, one thousand eight hundred and fifty-six, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvement, a description whereof is given in the words of the said Ball in the schedule hereunto annexed, and is made part of these presents.

In testimony whereof, I have caused these letters to be made
402 patent and the seal of the Patent Office has been hereunto affixed.

Given under my hand, at the city of Washington, this twenty-third day of September, in the year of our Lord one thousand eight hundred and fifty-six, and of the Independence of the United States of America the eighty-first.

[L. S.] GEO. C. WHITING,
Acting Secretary of the Interior.

Countersigned and sealed with the seal of the Patent Office.
C. MASON,
Commissioner of Patents.

The schedule referred to in these letters patent and making part of the same.

To all whom it may concern:

Be it known that I, Hosea Ball, of the city, county, and State of New York, have invented a new and useful imp't in bake ovens, and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings forming part of this specification, in which—

Figure 1 is a vertical section of the oven taken perpendicular to the axis of reel.

403 Figure 2 is a vertical section through the axis of reel.

Similar letters of reference in the several figures denote the same parts of the oven.

The nature of my invention consists in constructing the oven with a series of bread receivers swung between the ends of a reel which is hung in an interior perforated chamber, and is capable of rotation on a horizontal shaft; an arrangement being provided for the self delivery of the bread from the front of the oven, as will be hereinafter set forth.

In the drawing A is the fire chamber, B is the ash pit. The space C above the fire chamber communicates by openings *a* with the vertical side and back flues *c* and *d*, which communicate with the interior chamber by the openings *e* and *e'*.

Across the oven runs the shaft D, to which are secured the plates *f*, so as to constitute a reel within the interior chamber. Between the plates *f* are hung a series of platforms *h*, which will remain horizontal in all positions of the reel, the number depending on the diameter of the reel.

In the front of the oven is a chute, G, leading from the interior out-
404 ward, on the inner extremity of which are guides *g*, against which the edges of the platforms *h* will come in contact as the reel revolves. Above the chute G is the opening H for supplying bread to the oven. It is closed by a sliding door, I. The chute will also have a suitable door for closing it during the baking.

The platforms *h* are each in succession brought opposite opening H by the rotation of shaft D, and a supply of bread placed upon them.

All doors are then closed and the baking commenced. Owing to the perforated sides and back of the interior chamber all parts of it receive the full heat of the oven, suitable dampers regulating the course of the products of combustion to the chimney.

When the baking is completed the reel is revolved, causing the front edge of each platform to come in contact with the guides *g*, and by the depression thus produced causing the platform to assume the angle of the chute and discharge its bread thereon, when it passes to a receiver outside of the oven.

By this construction all parts of the interior chamber are rendered available for baking purposes, the lower part as well as the
405 upper; the construction of the baking chamber causing all parts to be equally well heated. The swing platforms, moreover, favor economy of space in the construction of the oven.

What I claim and desire to secure by letters patent is the perforated interior chamber in combination with the rotary reel, and the swinging platforms thereon, self discharging, substantially as set forth.

In testimony whereof I have hereunto signed my name before the subscribing witnesses.

HOSEA BALL.

Witnesses:
GEO. PATTEN.
JOHN S. HOLLINGSHEAD.

Exd.—L. R.

(Here follows diagram marked page 406.)

407 *Reissued letters patent granted Hosea Ball, October 12th, 1869.—Offered in evidence by defendants April 3d, 1877.*

The U. S. Patent Office to all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the records of

this office of the reissue letters patent granted Hosea Ball, dated October 12th, 1869, No. 3666, for oven.

In testimony whereof I, Ellis Spear, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this fifth day of August, in the year of our Lord one thousand eight hundred and seventy-five, and of the Independence of the United States the one hundredth.

[SEAL PATENT OFFICE.] (Signed) ELLIS SPEAR,
Acting Commissioner.

No. 3666. Reissue.

The United States of America to all to whom these letters patent shall come:

Whereas Hosea Ball, of New York, New York, has alleged
408 that he has invented a new and useful oven, for which letters patent were issued to him dated September 23, 1856 (which letters having been surrendered by him, the same have been cancelled and new letters ordered to issue to him on an amended specification), and has made oath that he is a citizen of the United States; that he verily believes he is the original and first inventor or discoverer of the said invention, and that the same hath not, to his knowledge and belief, been previously known or used; has paid into the Treasury of the United States the sum of thirty dollars and presented a petition to the Commissioner of Patents praying that a patent may be issued therefor:

These are, therefore, to grant to the said Hosea Ball, his executors, administrators, or assigns, for the term of fourteen years from the twenty-three day of September, one thousand eight hundred and fifty six, the full and exclusive right and liberty of making, using, and vending to others to be used, the said invention, a description whereof is given in the annexed schedule, and made a part of these presents.

409 In testimony whereof I have hereunto caused these letters to be made patent and the seal of the Patent Office to be hereunto affixed.

Given under my hand, at the city of Washington, this twelfth day of October, in the year of our Lord one thousand eight hundred and sixty-nine, and of the Independence of the United States of America the ninety-fourth.

[L. S.]

W. T. OTTO,
Acting Secretary of the Interior.

Countersigned and sealed with the seal of the Patent Office.

S. H. HODGES,
Acting Commissioner of Patents.

UNITED STATES PATENT OFFICE.

Hosea Ball, of New York, N. Y. Letters patent No. 15753, dated September 23, 1856, reissue No. 3666, dated October 12, 1869. Oven.

The schedule referred to in these letters patent and making part of the same.

To all whom it may concern:

Be it known that I, Hosea Ball, of the city, county and State of New York, have invented a new and useful improvement in ovens, of which the following is a description:

Nature and objects of the invention.

410 My oven is constructing with a series of bread-receiving tables or shelves suspended from a reel revolving within a chamber, into or through which the direct heat from the furnace is passed and properly distributed.

Description with reference to the drawings.

The accompanying drawings are sectional views illustrating my invention.

Figure 1 is a vertical transverse section.

Figure 2 is a vertical section in a plane coincident with axis of the reel.

Like letters of reference indicate corresponding parts in both views.

A represents the fuel receptacle of furnace.

B, the ash-pit, and

C, the combustion chamber, which communicates directly or indirectly in any proper manner with the chamber in which the bread-receiving shelves or platforms *h* are revolved.

D represents the shaft, and *f* the ends or arms of a reel, by which the shelves *h* are suspended and revolved.

The flues *c d*, and openings *a e e'*, to permit the passage or circulation of gases into or through the bread chamber, may be located and arranged in any effective manner, and any suitable system of
411 dampers may be employed to regulate the course or strength of the draught.

In front of the oven is an opening, H, employed for the introduction of bread; and closed by a door, I.

A chute, G, may be used for the discharge of bread, and the discharge may be made automatic by guides *g*, with which the edges of the shelves or platforms *h* will come in contact as the reel revolves, so as to incline the said shelves to the same angle as the chute.

The chute is to be closed by a suitable door during the baking operation.

Operation.

The shelves or platforms *h* are each, in succession, brought opposite the opening H, by the rotation of the shaft D, and a supply of bread placed upon them; the doors are then closed and the baking commenced. The reel may be rotated as required during the baking operation to apply an equal heat to the bread upon the several shelves or platforms. When the baking is completed the bread may be withdrawn from each platform in succession through the opening H, or, if preferred, it may be
412 discharged either automatically or otherwise through the chute G.

Claims.

I claim as my invention—

1. One or more swinging bread-holders suspended from the arms or end plates of a rotation reel, in combination with a furnace so arranged and connected that the products of combustion will pass into or through the chamber within which the bread-holders move.

2. In combination with a rotating wheel and swinging bread holders,

a flue around the chamber in which the reel rotates and communicating with said chamber through perforations in the wall between them.

3. In combination with a swinging bread holder revolving in an oven a discharging chute and tripping device by which the bread is delivered from its platform and into the chute, substantially as and for the purposes described.

To the above specification of my improvement in bake-ovens, I have signed my hand this 31st day of August, 1868.

HOSEA BALL.

Witnesses:
EDWARD H. KNIGHT.
WM. H. BRERETON.

(Here follows diagram marked page 413.)

414 *Reissue letters patent granted Hosea Ball, June 14th, 1870.—Offered in evidence by defendants, April 3d, 1877.*

65.

The U. S. Patent Office to all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office of the reissue letters patent granted Hosea Ball, dated June 14, 1870, No. 4026, for ovens.

In testimony whereof I, Ellis Spear, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed, this fifth day of August, in the year of our Lord one thousand eight hundred and seventy-five, and of the Independence of the United States the one hundredth.

[SEAL PATENT OFFICE.] (Signed) ELLIS SPEAR,
Acting Commissioner.

No. 4026. Reissue.

The United States of America to all to whom these letters patent shall come:

Whereas Hosea Ball, of New York, New York, has alleged that
415 he has invented a new and useful ovens, for which letters patent were issued to him dated September 23, 1856, the same surrendered and new letters issued to him dated October 12, 1869 (which last letters having been surrendered, the same have been canceled and new letters ordered to issue to him on an amended specification), and has made oath that he is a citizen of the United States; that he verily believes he is the original and first inventor or discoverer of the said invention, and that the same hath not to his knowledge and belief been previously known or used; has paid into the Treasury of the United States the sum of thirty dollars, and presented a petition to the Commissioner of Patents praying that a patent may be issued therefor:

These are, therefore, to grant to the said Hosea Ball, his executors, administrators, or assigns, for the term of fourteen years from the twenty-third day of September, one thousand eight hundred and fifty-six, the full and exclusive right and liberty of making, using, and vending to others to be used, the said invention, a description whereof is given in the the annexed schedule and made a part of these presents.

In testimony whereof I have caused these letters to be made patent, and the seal of the Patent Office to be hereunto affixed.

Given under my hand, at the city of Washington, this fourteenth
416 day of June, in the year of our Lord one thousand eight hundred and seventy, and of the Independence of the the United States of America the ninety-fourth.

[L. S.]

W. T. OTTO,
Acting Secretary of the Interior.

Countersigned and sealed with the seal of the Patent Office.

SAM'L S. FISHER,
Commissioner of Patents.

UNITED STATES PATENT OFFICE.

Hosea Ball, of New York, N. Y. Oven.

Specification forming part of letters patent No. 15753, dated September 23, 1856; reissue No. 3666, dated October 12, 1869; reissue No. 4026, dated June 14, 1870.

Be it known that I, Hosea Ball, of the city, county, and State of New York, have invented a new and useful improvement in ovens, of which the following is a description:

Nature and objects of the invention.

My oven is constructed with a series of bread-receiving tables or shelves suspended from a reel revolving within a chamber, into or through which the direct heat from the furnace is passed and properly distributed.

Description with reference to the drawing.

417 The accompanying drawing is a sectional view, illustrating my invention.

Figure 1 is a vertical transverse section.

Fig. 2 is a vertical section in a plane coincident with the axis of the reel.

Like letters of reference indicate corresponding parts in both views.

A represents the fuel receptacle of furnace, B the ash-pit, and C the combustion chamber, which communicates directly or indirectly, in any proper manner, with the chamber in which the bread-receiving shelves or platforms *h* are revolved.

D represents the shaft, and *f* the ends or arms of a reel, by which the shelves *h* are suspended and revolved. The flues *c d* and openings *a e e'*, to permit the passage or circulation of gases into or through the bread chamber, may be located and arranged in any effective manner; and any suitable system of dampers may be employed to regulate the course or strength of the draft.

In front of the oven is an opening, H, employed for the introduction of the bread, and closed by a door, I.

A chute, G, may be used for the discharge of bread, and the discharge may be made automatic by guides *g*, with which the edges of the shelves or platforms *h* will come in contact as the reel revolves, so as to incline the said shelves to the same angle as the chute.

418 The chute is to be closed by a suitable door during the baking operation.

Operation.

The shelves or platforms *h* are each, in succession, brought opposite the opening H by the rotation of the shaft D, and a supply of bread placed upon them. The doors are then closed and the baking commenced.

The reel may be rotated as required during the baking operation, to apply an equal heat to the bread upon the several shelves or platforms.

When the baking is completed the bread may be withdrawn from each platform in succession through the opening H; or, if preferred, it may be discharged, either automatically or otherwise, through the chute G.

Claims.

I claim as my invention—

1. One or more swinging bread-holders suspended from the arms or end plates of a rotating reel, in combination with a furnace so arranged and connected that the products of combustion will pass into or through the chamber within which the bread-holders move.

2. In combination with a rotating reel and swinging bread-holders, a flue on one or more sides of the chamber in which the reel rotates, communicating with said chamber through apertures in the wall between them.

419 3. In combination with a swinging bread-holder revolving in an oven, a discharging chute and tripping device, by which the bread is delivered from its platform and into the chute, substantially as and for the purposes described.

HOSEA BALL.

Witnesses:
EDWARD H. KNIGHT.
JAS. MELDRUM.

(Here follows diagram marked page 420.)

421 *Submission of cause.—Extract from minutes of 4th April*, 1877.

HOSEA BALL ET ALS. vs. JAMES HALL ET ALS. } No. 6811.

This cause came on to be further heard, and having been argued by J. R. Beckwith for complainants, and G. Schmidt for defendants, the court took time to consider, and allowed defendants' solicitor one week to submit brief.

Judgment dismissing bill.—Extract from judgment book.

Circuit court of the United States, fifth circuit and district of Louisiana, April term, 1877.

NEW ORLEANS, *Monday, June 25th*, 1877.

Court met pursuant to adjournment.
Present, Hon. W. B. Woods, circuit judge.

HOSEA BALL ET ALS.
vs. } No. 6811.
JAMES HALL ET ALS.

This cause came on to be heard on the bill, answer, amended
422 answer, replications, proofs, and exhibits, and was argued by counsel.

On consideration whereof, it is ordered, adjudged, and decreed that the complainants' bill be dismissed, at their costs, to be taxed.

Decree rendered June 25th, 1877.

Decree signed June 25th, 1877.

(Signed) W. B. WOODS, *Judge.*

Motion for appeal & order.—Entered and filed June 25th, 1877.

HOSEA BALL ET ALS.
vs. } No. 6811.
JAMES HALL ET ALS.

And the said decree having been made and entered, the said complainants, by their solicitors, in open court, moved the court that they be allowed an appeal from said decree to the Supreme Court of the United States; and thereupon the court did allow and grant, in open court, the said complainants an appeal as prayed for in said motion, returnable in said Supreme Court on the second Monday in October next, upon giving bond with sufficient security in the sum of five hundred dollars, conditioned as the law directs.

423 *Appeal bond.—Filed August 20, 1877.*

Know all men by these presents that we, Hosea Ball and Margaret Haugherty, as principals, and as surety, are held and firmly bound unto N. A. Baumgarden and Justin Langles, composing the firm of Baumgarden and Langles, and James Hall, in the full sum of five hundred dollars, to be paid to the said N. A. Baumgarden, Justin Langles, and the said James Hall, their executors, administrators, or assigns, to which payment, well and truly to be made, we bind ourselves, our heirs, executors, administrators, and assigns by these presents, sealed with our seals and dated the 16th day of August, A. D. 1877.

The condition of this obligation is such, that whereas lately at a session of the circuit court of the United States for the district of Louisiana, in a suit in equity depending in said court between the said Hosea Ball and the said Margaret Haugherty, complainants, and the said H.
A. Baumgarden and Justin Langles, defendants, a decree was
424 rendered against the said Hosea Ball and the said Margaret Haugherty, and they, the said last-named persons, complainants, having in due form, by the order of said court, been allowed an appeal in open court and in due form, as appears of record in said cause in said court, to the Supreme Court of the United States, at its next term thereof, to be holden at Washington on the second Monday in October next:

Now, therefore, if the said Hosea Ball and Margaret Haugherty shall prosecute their said appeal to effect, and answer all damages and costs

if they fail to make good their plea, then this obligation shall be null and void, but otherwise to remain in full force and effect.

(Signed) HOSEA BALL,
By MARGARET HAUGHERY. [L. S.]
(Signed) MARGARET HAUGHERY,
N. BURKE. [L. S.]
(Signed) P. pro NICHOLAS BURKE, *Security*. [L. S.]

Signed and sealed in presence of—
(Signed) H. WINSLOW.
" BERNARD KLOTZ.
" DAVID HUGHES.

425 UNITED STATES OF AMERICA:

Circuit court of the United States, fifth circuit and district of Louisiana.

CLERK'S OFFICE.

I, Francis A. Woolfley, clerk of the circuit court of the United States for the fifth circuit and district of Louisiana, do hereby certify that the foregoing 524 pages contain and form a full, complete, true, and perfect transcript of the record and proceedings had, together with all the evidence adduced on the trial of the case of Hosea Ball et als. vs. James Hall et als., No. 6811 of the docket, so far as the same now remain of record or on file in said court.

Witness my hand and the seal of said court, at the city of New Orleans, this 1st day of October, A. D. 1877.

[SEAL.] F. A. WOOLFLEY, *Clerk*.

I, W. B. Woods, United States judge for the district of Louisiana, do certify that Francis A. Woolfley, whose name is signed to the above certificate as clerk of the circuit court of the United States for the fifth circuit and district of Louisiana, was, at the time of signing said certificate, and is now, the clerk of said court; that said certificate is in due form of law, and that full faith and credit are due to his official attestations as such clerk.

Given under my hand, at the city of New Orleans, in said district, this 1st day of October, A. D. 1877.

W. B. WOODS, *Judge*.

426 THE UNITED STATES OF AMERICA:

Circuit court of the United States, district of Louisiana.

The President of the United States to Justin Langles and N. A. Baumgarden, composing the firm of Baumgarden & Langles, greeting:

You, and each of you, are hereby cited and admonished to be and appear at a Supreme Court of the United States to be holden at the city of Washington on the second Monday of October next, pursuant to a motion & an order for appeal filed in the clerk's office of the circuit court of the United States for the fifth circuit and district of Louisiana, wherein Hosea Ball and Mrs. Margaret Haughery, widow, are complainants and appellants, and you, and each of you, are defendants and appellees, to show cause, if any there be, why the judgment rendered against the said Hosea Ball & Mrs. Margaret Haughery, w'ow, as in

said motion for appeal mentioned, should not be corrected, and why speedy justice should not be done to the parties in that behalf.

Witness the honorable Morrison R. Waite, Chief Justice of the Supreme Court of the United States, this 27th day of June, in the year of our Lord one thousand eight hundred and seventy-seven.

W. B. WOODS, *Judge.*

(Indorsed:) Justin Langles, N. A. Baumgarden. United States circuit court. No. 6811. Hosea Ball et al. vs. James Hall et al. Citation.

Marshal's return.

Received Jun. 28, 1877, by the U. S. marshal, and on the 30 day of June, 1877, served a copy of the within citation on Justin Langles, within defendant and appelled, by handing the same to him in person in the city of New Orleans, La.

DAN. A. ROSE,
D'y U. S. Marshal.

On the 27th day of Aug., 1877, personally appeared before me, the subscriber, Dan. A. Rose, a deputy marshal, and makes oath that he served a copy of the within citation as stated in his official return hereon.

DAN. A. ROSE,
D'y U. S. Marshal.

Sworn to and subscribed before me this 27 day of August, 1877.

F. B. VINOT,
U. S. Comm'r.

Received Jun. 28, 1877, by the U. S. marshal, and on the 5th day of July, 1877, served a copy of the within citation on N. A. Baumgarden, within-named defendant and appellee, by handing the same to his wife, Mrs. Baumgarden, at their domicile, 133 Jackson st., he being absent at the time of service.

W. G. ELLIOTT,
Dep. Marshal.

On this 12th day of July, 1877, personally appeared before me, the subscriber, W. G. Elliott, a deputy marshal, and makes oath that he served a copy of the within citation as stated in his official return hereon.

W. G. ELLIOTT.

Sworn to and subscribed before me this 12th day of July, 1877.

F. B. VINOT,
U. S. Comm'r.

(Indorsement on cover:) No. 228. Hosea Ball and Margaret Haughery, appellants, vs. Justin Langles and N. A. Baumgarden, composing the firm of Baumgarden & Langles. Louisiana C. C. U. S. Filed 5th October, 1877.

REC. 228—1 1

OFFICE SUPREME COURT U. S.
FILED
MAR 29 1880
D. W. MIDDLETON, Clerk.

IN THE

Supreme Court of the United States.

October Term, 1879.

HOSEA BALL AND MARGARET HAUGHERY,
APPELLANTS,

vs.

BAUMGARTEN AND LANGLES.

No. 228.

Appeal from U. S. Circuit Court for the District of Louisiana.

Brief for Plaintiffs and Appellants.

This is a bill in equity to recover damages for the violation of certain letters-patent and their reissue by the United States for a new and useful improvement in ovens, accompanied by a prayer for an account of profits and sales for an injunction and judgment against defendants.

The defence is: (*a*) That the specification annexed to the letters-patent is incomplete and ambiguous, and insufficient to enable any person skilled in the art or science to which it appertains to make and use the same; (*b*) that a prior patent was issued by France to Covlet for the same invention and discovery and the same principle and combination; (*c*) that plaintiffs' patent is not new; (*d*) that defendants' oven is very different in kind from that patented by

plaintiffs, and defendants do not use or employ, and have never used or employed the same; (*e*) defendants deny having ever used plaintiffs' invention, or damaged them, or deprived them of any profits, or that they are now using the same; (*f*) that plaintiffs' relief is at law.

Rec., pp. 1 to 8.

Judgment dismissing the bill, (Rec., p. 151,) and the plaintiffs have appealed.

The questions arising on this record are:

First. Are the letters-patent issued to the plaintiffs valid, and was the lower court justified in setting them aside and decreeing them invalid by a final judgment?

Second. If the letters-patent are valid, to what relief are plaintiffs entitled?

ASSIGNMENT OF ERRORS.

1st. The court below erred in dismissing the plaintiffs' bill.

2d. The court erred in giving a final judgment against the plaintiffs.

ARGUMENT.

The invalidity of the letters-patent is asserted by the defence to rest on the following grounds:

1st. WANT OF NOVELTY AND UTILITY.

Sept. 23, 1856, letters-patent issued to plaintiff for an improvement in ovens, claiming as new and useful "The "perforated interior chamber in combination with the ro- "tary reel, and the swinging platforms thereon, self-dis- "charging substantially as set forth."

Record, p. 28.

Oct. 12, 1869, reissue of same letters-patent, claiming as new and useful, No. 3666.

1st. One or more swinging bread-holders, suspended from the arms or end-plates of a rotary reel, in combination with a furnace, so arranged and connected that the production will pass into or through the chamber within which the bread-holders move.

2d. In combination with a rotating-reel and swinging bread-holders, a flue around the chamber in which the reel rotates, communicating with said chamber through perforations in the wall between them.

3d. In combination with a swinging bread-holder, revolving in an oven, a discharging chute and tripping device by which the bread is delivered from its platform and into the chute, substantially as and for the purposes described.

Record, p. 17.

June 14, 1870, another reissue of said letters-patent, No. 4026.

1st. Same as above, No. 3666.

2d. Same as above, substituting "a flue on one or more "sides of the chamber" instead of "a flue around the "chamber," and the word "apertures" instead of "perfo- "rations."

3d. Same as above, No. 3666.

Rec., p. 20.

September 19, 1870, extension of the above letters-patent.

Record, pp. 23, 24, 25.

But this reissue was strongly opposed; and all the arguments brought to bear upon the validity of plaintiffs' patent, and renewed in this litigation, were passed upon adversely by the Commissioner at the time of the reissue; and we rely on the reasons set forth by him as conclusive, and to which nothing in our opinion need be added but the judgments of L. B. Woodruff and Sam'l Blatchford, J. J., on Record, pp. 37 to 44, inclusive, and the affidavit of Sam'l Brock, Rec., p. 15.

This disposes of the points of defence *a*, *b*, and *c*, before noted.

2d. But, say the defendants, even if the validity of the patent be admitted, the defendants' ovens are very different in kind from that patented by plaintiff, and that they have never used or employed the same, and have not damaged him, &c., &c.

We submit that the evidence shows an infringement of plaintiffs' patent or a clear evasion.

See testimony of Johnson, p. 118; Whitaker, p. 121; Adams, p. 125; Klotz, p. 127; James, p. 131.

The defendants offered no testimony, and neither of them was sworn as a witness.

We conceive this omission to be conclusive.

The decree of the lower court was rendered June 25, 1877, without any opinion.

Respectfully submitted.

DURANT & HORNOR,
Attys. for Appellants.

WASHINGTON, D. C., *March* 15, 1880.

OFFICE SUPREME COURT U. S.
FILED
MAR 15 1880
D. W. MIDDLETON, Clerk.

Supreme Court of the U. S.

October Term, 1879.

HOSEA BALL AND MARGARET HAUGHERY,
Appellants,
against
JUSTIN LANGLES AND OTHERS, *Appellees.*
No. 228.

From Circuit Court of United States for District of Louisiana.

CONWAY ROBINSON
WITH
LEIGH ROBINSON,
Counsel for Appellees.

JANUARY, 1880.

R. O. Polkinhorn, Printer, Washington, D. C.

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From Circuit Court of United States for District of Louisiana.

Statement of the Case.

In 1863, the Master of the Rolls (Sir *John Romilly*) said:

"That hoops were worn in this country by our ancestors, as by our grand-mothers and great-grand-mothers, is, I apprehend, a fact of which one has knowledge historically—which is not necessary to have established by evidence. But the writings of that time might be referred to as proving their use. I have some lines in my head from *Alexander Pope's* 'Rape of the Lock,' which would go a great way to show that instruments of this sort were used for dresses at that time." *Thompson* vs. *James*, 32 Beavan, 572.

Not only according to the opinion of the learned Master of the Rolls, but, also, according to the opinion of this court in *Brown* vs. *Piper*, 91 U. S., (1 Otto) 42, judicial notice may, if it shall appear material in this cause, be taken of the facts that, under Tiberius, there were schools and teachers of cookery in Rome; that Italian exercised influ-

ence on French cookery; that France is, and long has been, famous for superior cooks and ovens; and that, from the continent of Europe, much has been borrowed in the United States of America.

Among the benefactors of France and the United States are Louis Eustache Ude, whose work—the French Cook—was reprinted at Philadelphia in 1828; and Mons'r Louis Joseph Covlet, who, in 1846, was at No. 9, rue des Magazins, Paris. The distinctive features of his patent, of that year, and of the additions of 1847 and 1848, appear in the French copy, pp. 51 to 58 of the record, and in the English translation, pp. 58 to 68; and in the drawings annexed to the record between pages 142 and 143.

Perhaps Hosea Ball had not, as to inventions of Covlet and others, informed himself so well as he should have done before obtaining his patent of Sept. 23, 1856 (being Document No. 9, pp. 28 to 30, and pp. 144, 145), or that of Oct. 12, 1869 (being Document No. 4, pp. 17, 18, and pp. 145, 146), or that of June 14, 1870 (being No. 4,026, Re-issue pp. 20, 21, and pp. 148, 149). However this may be, it is quite certain that the first of those patents was surrendered and cancelled when the second was issued; and the second was surrendered and cancelled when the third was issued; and, in judgment of law, those patents of Sept. 23, 1846, and October 12, 1869, are extinguished. *Moffitt* vs. *Garr, &c.*, 1 Black, 273. It is equally certain that the patent of June 14, 1870 (being No. 4,026, Re-issue pp. 20, 21 and pp. 148, 149), was for the same term as the other two—to wit: fourteen years, from Sept. 23, 1856; and that term was fully and completely ended on the 23d of September, 1870, being more than two years before the bill in this cause was filed.

During the term of fourteen years, there were, by Documents No. 1 and No. 2, pp. 12 to 14, agreements under which Hosea Ball, for a comparatively small interest in the patent for his so-called invention, received from Mrs. Margaret Haughery several sums amounting together to *fifteen thousand dollars*.

It seems to have been contemplated, at the time of those agreements, that diligence would be used by him to obtain from the United States an extension of his patent; and it may be inferred that great diligence was used.

An act of Congress of July 8, 1870, "to revise, consolidate and amend the Statutes relating to patents and copyrights," (16 Stat., p. 198 to 217), contains (pp. 208, 209) the following sections:

§ 62. "That whenever it shall appear that the patentee, at the time of making his application for the patent, believes himself to be the original and first inventor or discoverer of the thing patented, the same shall not be held to be void on account of the invention or discovery, or any part thereof, having been known or used in a foreign country before his invention or discovery thereof, if it has not been *patented or described in a printed publication.*"

§ 63. "That where the patentee of any invention or discovery, the patent for which was granted *prior to the second day of March, eighteen hundred and sixty-one*, shall desire an extension of his patent beyond the original term of its limitation, he shall make application therefor, in writing, to the Commissioner, setting forth the reasons why such extension should be granted; and he shall also furnish a written statement, under oath, of the ascertained value of the invention or discovery, and of his receipts and expenditures on account thereof, sufficiently in detail to exhibit a true and faithful account of the loss and profit in any manner accruing to him by reason of said invention or discovery; and said application shall be filed not more than six months *nor less than ninety days before the expiration of the original term of the patent*, and no extension shall be granted after the expiration of said original term."

§ 64. "Upon the receipt of such application and the payment of the duty required by law, the Commissioner shall cause to be published in one newspaper in the city of Washington, and in such other papers

published in the section of the country most interested adversely to the extension of the patent, as he may deem proper, *for at least sixty days prior to the day set for hearing the case*, a notice of such application, and of the time and place when and where the same will be considered, that any person may appear and shew cause why the extension should not be granted."

§ 65. "On the publication of such notice the Commissioner shall refer the case to the principal examiner having charge of the class of inventions to which it belongs, who shall make to said Commissioner a full report of the case, and particularly whether the invention or discovery was new and patentable when the original patent was granted."

§ 66. "The Commissioner shall, at the time and place designated in the published notice, hear and decide upon the evidence produced, both for and against the extension; and if it shall appear to his satisfaction that the patentee, without neglect or fault on his part, has failed to obtain, from the use and sale of his invention or discovery, a reasonable remuneration for the time, ingenuity and expense bestowed upon it, and the introduction of it into use, and that it is just and proper, having due regard to the public interest, that the term of the patent should be extended, the said Commissioner shall make a certificate therein, renewing and extending the said patent for the term of seven years from the expiration of the first term, which certificate shall be recorded in the Patent Office, and thereupon the said patent shall have the same effect in law as though it had been originally granted for twenty-one years."

Though the invention or discovery by Covlet had been *patented*, and *described in a printed publication*—though the only patent granted to Hosea Ball *prior to the 2nd day of March, eighteen hundred and sixty-one* had been surrendered, cancelled, and extinguished, and was no longer capable of *extension*—and though application for extension could not be filed according to the act of 8th of July, 1870, which required "said application shall be filed not more than six months *nor less than ninety days before the expiration of the original time of the patent*"—and notwithstanding the difficulty of having such publication of notice, and such reference to and full report by 'the principal examiner,' and such hearing and decision by 'the Commissioner,' as

the act required; nevertheless there is (p. 20) the following 'certificate of extension:'

"Whereas, upon the petition of Hosea Ball of New York, for the extension of the patent granted to him Sept. 23, 1856, reissued October 12, 1869, and again reissued June 14, 1870, for an 'oven,' the undersigned, *in accordance with the act of Congress*, approved the 8th day of July, 1870, entitled 'an act to revise, consolidate, and amend the statutes relating to patents and copyrights,' did, on the 14th day of September, 1870, *decide that said patent ought to be extended.* Now, therefore, I, Samuel S. Fisher, Commissioner of Patents, *by virtue of the power* vested in me by said act of Congress, do reissue and extend the said patent, and certify that the same is hereby extended for the term of seven years from and after the expiration of the first term, viz. from the 23d day of September, 1870, which certificate being duly entered of record in the Patent Office, the said patent has now the same effect in law as though the same had been originally granted for the term of twenty-one years.

In testimony whereof, I have caused the seal of the Patent Office to be hereunto affixed, this 14th day of September, 1870, and of the Independence of the United States, the ninety-fifth.

(Signed.)

[L. S.] SAM'L S. FISHER."

Though performance of the pre-requisites to this certificate is examinable in this suit, yet the complainants have altogether failed to shew such performance. It could not be shewn for the plain and simple reason that there never had been performance. *At no time* after the passage of the act of Congress of July 8, 1870 did the Commissioner of Patents lawfully "*decide that said patent ought to be extended.*" After the passage of said act of Congress there was no time at which the Commissioner of Patents could "by virtue of the power vested in" him "by said act of Congress" renew and extend the said patent. It would have been so even if the patent of September 23, 1846 had remained in force. For the day of "the expiration of the original term of the patent" was September 23, 1870.

In the present cause the bill, p. 1 to 4, was not filed till the 19 of October, 1872; the answer of Baumgarden & Langles, filed January 21, 1873, is p. 5 to 9. In it they say:

7. That they are informed and believe it to be true that the invention and discovery, and the same principle and combination patented in and by the letters-patent mentioned in the bill, "were patented on the 13th day of June, 1846, by Louis Joseph Covlet, then residing in Paris, No. 9 Rue des Magasins, and now residing in said city, No. 35 Rue Fessard, in the Republic of France; the said patent having been granted the said Covlet by the Government of France existing at the aforesaid 13th of June, 1846."

8. That said invention and discovery and the same principle of combination, and substantial and material parts thereof, patented in and by the letters-patent mentioned in the bill, "were mentioned and described in certain printed publications, that is to say in the *Bulletin de lois de France*, of the years 1846, 1847 and 1848, published in Paris in the aforesaid years, by order of the French Government, and in conformity with the laws of the country then in force; also in a work published by direction of the minister of agriculture and commerce of France, entitled *des Brevets d' Inventions* (Catalogue of Patents) published in Paris in the years 1846, 1847 and 1848; also in another work published by order of the aforesaid minister of agriculture and commerce, in Paris, during the aforesaid years 1846, 1847 and 1848, and entitled, *Description des Machines* et *Procédés pour lesquels les brevets d' Invention ont été pris sous le regime de la loi de 1844 publiée par ordre du ministre, &c.,*" (description of the machines and inventions for which patents have been obtained in conformity to the law of 1844, published by order of the minister, &c.,); "all of which aforesaid publications were published as aforesaid by the French Government or its officers in Paris, France, and publicly circulated and distributed prior to the supposed invention and discovery of the said Hosea Ball."

9. That said invention and discovery and substantial and material parts thereof, patented as mentioned in the bill, had been patented, invented and discovered previously by one Louis Joseph Covlet, who resides at No. 35 Rue Fessard, Paris, France, and obtained a patent therefor as early as the 13 day of June, 1846, as the whole will more fully appear by a duly authenticated copy of the said letters-patent, together with three additions thereto, obtained from the French Government in conformity with the patent law of France on the 7th and 12th of June, 1847, and the 19th October, 1848."

10. The defendants say "that the new and useful oven which the

patentee claims as having been infringed by" them "is very different in kind from that used by these defendants who do not use, employ, or have ever used or employed, the oven patented by the said Hosea Ball."

11. The defendants "deny that they have ever used the invention claimed by complainants or injured or wronged them, or deprived them of any benefit or profit or advantage whatever, or that they are now using or have ever used the oven patented by complainant or in any way infringed his aforesaid patent."

12, The defendants "deny that the said complainants are entitled to the relief or any part thereof in the said complaint demanded;" and they insist that all the matters in the bill mentioned and complained of "are matters which may be tried and determined at law, and with respect to which the said complainant is not entitled to any relief from a court of equity."

Though the plaintiffs moved, April 3, 1873, for an order, as stated on p. 9, for the defendants to procure and file the publication in France, yet, on the 5th of May, 1873, they filed a replication, pp. 9, 10; and on the same day (May 5, 1873), obtained the rule for an injunction, p. 10.

On this rule is a minute of evidence filed June 13, 1873, pp. 11, 12. It embraces, as offered by plaintiffs—No. 3, Affidavit of Saml. Brock, pp. 15 to 17; No. 6, Certificate, Commissioner of Patents, p. 23; No. 7, Document as to patent of June 6, 1871, to Donald McKenzie, pp. 25 to 27; with drawing between pages 26 and 27; No. 8, Document as to patent of Oct. 11, 1870, to James Hall, pp. 27, 28, with drawing between pages 28 and 29, and between p. 140 and 141; No. 10, Document, pp. 30 to 38, embracing bill in equity in Circuit Court of U. S. for Southern District of New York, by Hosea Ball, against John C. Wilson, and answer thereto; No. 11, Document, pp. 38 to 45, embracing bill in equity in same court, by Hosea Ball, against Thomas R. Harris, and answer thereto; No. 12, Affidavits, pp. 45, 46; No. 13, Affidavits, pp. 46, 47, of Bernard Klotz and Wm. R. Whitaker.

The same minute of evidence, before mentioned, as filed

June 13, 1873, states, on p. 12, that "Defendants, in rule, offered affidavits of Justin Langles, marked No. 14; Affidavit of Wm. Clough, No. 15; Joseph Covlet's brevet, No. 16; first addition to same marked No. 17." These documents follow in order, to wit: No. 14, p. 47; No. 15, pp. 47 to 51; No. 16 and 17, pp. 51 to 67.

Although the bill was filed Oct. 19, 1872 (p. 1), yet, after the answer of Jan. 21, 1873 (pp. 6 to 9), there was no application for an injunction until May 5, 1873. Then it was stated that the validity of Ball's patent had been adjudicated and established in New York; and the rule for an injunction (p. 10) was obtained upon the ground that such adjudication, and the interference by defendants, would appear, by the documents and affidavit, to be filed and produced by complainant. Document No. 18, p. 68, *et seq.*, was so produced and filed. It contains, pp. 69 to 99, copies of what was deposed in suits in New York; pp. 100 to 102, specification of what was claimed in 1860 by Duncan McKenzie or his assignee; pp. 103 to 114, copies of other depositions in those suits in New York. To said document No. 18, as well as to documents Nos. 10 and 11, there are valid objections, (p. 131), the defendants in the present case not being parties to any of those suits in New York.

In those suits in New York, there was not shown, as to a patent in France, what appears in the present case.

On the 13th of June, 1873, the defendants, Baumgarden and Langles, in a supplemental answer (p. 116) refer to "publications containing a description of references to the patents of Louis Joseph Covlet granted on the 13th of June, 1846, and the improvements thereof granted in the years 1846, 1847 and 1848, to wit:

"1. In the *Bulletin des Lois*, No. 1351, for the month of November, 1846, page 1130, No. 435.

2. Same work, No. 1455, for the month of February, 1848, page 232, Nos. 672 and 673.

3. Same work, No. 216, for October, 1849, page 524, No. 397.

4. *Catalogue des Brevets et Inventions du 1ier Janvier au 31 December, 1846 dressé par ordre du ministre de l' agriculture et du commerce Paris* 1847, page 130, No. 3733.

5. In the same work for the year 1847, page 127, two improvements mentioned.

6. Same work for 1848, page 59, another improvement patented.

7. In a work published in Paris in 1851 entitled '*Genie Industriel*,' Revue des Inventions Francaises et étrangerès, volume 2, pages 221 and 222 is to be found a description of Covlet's oven, and at page 284 of same volume is a diagram showing the vertical section of the said patented oven."

On the next day after this supplemental answer was filed the rule for an injunction was called up; and on motion of the solicitor for complainants it was ordered that said rule be discontinued. (p. 117.)

Of the affidavits on this motion, the most important is that (pp. 47 to 51) made June 6, 1873 by William Clough* whose "business is that of consulting and superintending machinist and engineer." He says, on p. 49:

"I have visited and carefully examined the premises, including the ovens made and used by Messrs. Baumgarden & Langles, respondents in this suit, and I have examined the ovens and furnaces used by said Baumgarden & Langles with particular reference to the charges of infringement therein made. The operation of baking is conducted by Messrs. Baumgarden & Langles in the use of several plain and several mechanical ovens. In the former, or plain ovens, no reels or mechanical contrivances for handling the bread are used; consequently there can be in these ovens *no use of the mechanical devices included in the patent of Hosea Ball, and no infringement of his claims.*"

*In the Court below, on p. 3 of a reply to complainant's brief, Mr. G. Schmidt said: "We were greatly surprised to find at page 16 of complainant's brief that this affidavit was filed 'in resistance to a motion for a preliminary injunction' which is true, but the counsel is in error in saying that said application 'was *never heard*.' The reverse is the fact; the application was strenuously argued before Judge Durell by Mr. Beckwith for plaintiffs and Judge Billings and myself for defendants (see minutes 14th of June, 1873, page 343). On the argument on the 13th June, the judge intimated he would not grant the injunction; plaintiff thereupon obtained a continuance till the following day, when, on motion of Mr. Beckwith, they obtained leave to discontinue the rule, which was done and it has never been renewed."

Afterwards, comparing the device of Hosea Ball with Covlet's patent, he says:

"Should it be assumed that the term products of combustion employed by Hosea Ball in the reissued letters-patent No. 4,026, may include the heat above without including the gases or those products of combustion which, if not intercepted, would enter the space in which the bread holders move, then *in that case the device specified by Hosea Ball would be an embodiment of Covlet's patent, and would be clearly anticipated* by that device. So that if the claim of Hosea Ball does not include the contact of the crude products of combustion with the bread in the oven, but means the heat alone with the gases and crude products of combustion excluded, then the device included in H. Ball's patent is the same as that presented in Covlet's French patent, and is clearly anticipated thereby."

The defendants filed the patent of Sept. 23, 1856, with the schedule therewith, p, 143 to 145, and also filed the reissue of October 12, 1869, with its schedule, p. 145 to 148, and also filed the reissue of June 14, 1870, with its schedule, pp. 149, 150. And besides the supplemental answer already mentioned, as filed June. 13, 1873, another which had been presented May 21, 1873, was admitted and filed June 13, 1873 (p. 115), containing allegations as to the circumstances of the surrender of the original letters-patent and the reissue; p. 117 is the replication.

Subject to the protest, pp. 137, 138, and other objections, (pp. 118, 120, 121, 122, 124, 125, &c.,) depositions were taken of complainant's witnesses, p. 118, *et seq.* And therewith, are documents to which there are objections, pp. 129 to 131.

Not only did the complainants fail to ~~answer~~ renew the motion for injunction, but they were not diligent in bringing the cause to a hearing. *So late as Dec. 18, 1875*, on a *motion to amend the bill*, it was ordered (p. 143) that they "*have leave to file an amended bill*" *upon conditions*; one of which is "upon fixing the cause for trial at an early day," p. 143. Although in New York there had been a decree in one suit,

in December, 1872 (p. 44), and in another in March, 1873, yet there was afterwards a lapse of about *four years* before the solicitor for complainants moved to have this cause fixed for trial. On his motion, it was fixed for trial on Tuesday, 3d day of April, 1877. The oral argument was on the 3d and 4th; the court took time to consider (p. 150), and, after consideration, it was, on the 25th of June, 1877, decreed "that the complainant's bill be dismissed—at their costs to be taxed" (p. 151).

Whereupon, there was an appeal to the Supreme Court of the U. S., the next term of which was to begin on the second Monday of October, 1877, being after the expiration not only of the fourteen years mentioned in the three patents of Sept. 23, 1856, Oct. 12, 1869, and 14th of June, 1870, but, also, after the expiration of the further term of seven years mentioned in the certificate, p. 20.

Brief of the Argument.

"According to the course and principles of courts of equity," the decree of the Circuit Court dismissing the bill should be affirmed—

1. For that the plaintiff is not entitled to the aid of a court of equity to have either an injunction or an account, In 1829, the Master of the Rolls (Sir *John Leach*) said: "Does not the jurisdiction of this court depend entirely upon the injunction? I should like to have this point argued. I have a recollection of cases that determine that the injunction is the ground of the account; it is the injunction that gives the account; the remedy is by an action at law; in aid of the action you may file a bill of discovery. The account is merely consequential. I think, upon general principle, without authority, it must be so." *Baily* v. *Taylor*, 1 Tamlyn, 298, 299; 5 Cond. Eng. Ch.

R., 400, 401. During the argument the Master of the Rolls said: "You all concur in the opinion I expressed the other day that the injunction is the foundation of the account." 1 Tamlyn, 301. After the conclusion of the argument, he said: "The question is whether it is fit that a court of equity should interfere? I must consider the application for an injunction as made to me this day in December, 1829, and I am to consider whether a work published in 1811 is to be prohibited by an injunction in 1829; the defendant's work was published in 1811. Is a court of equity to interfere after so many years have elapsed since the first publication? I am of opinion that it would be contrary to principle were I to grant an injunction."—"Not granting an injunction, the court cannot decree an account." S. C., 1 Tamlyn, 305, 306; 5 Cond. Eng. Ch. R., 404, 405; 1 Russ. & Mylne, 73, 4 Cond. Eng. Ch. R.

The subject was considered more than once by the Vice-chancellor who subsequently became Lord Chancellor *Hatherley*. In 1858 that Vice-chancellor (Sir *W. Page Wood*), said:

"I must adhere to the observations I made in *Smith* v. *The London & South Western Railway Co.* (Kay 408), as to the right to an account being dependent mainly upon the right to an injunction so that if for any reason an injunction cannot be obtained, there can be no right to an account; a rule for which there is good reason, since the questions involved in taking accounts of the particular instances in which patents have been infringed and of the profits thereby made are questions of great nicety and difficulty and never tend to any satisfactory result. *Price's Patent Candle Co.* v. *Bauwen's Patent Candle Co.*, 4 Kay & Johnson, 730. He said: "It is the misfortune of the plaintiffs that when they made their interlocutory application their case was not established with sufficient clearness to enable them to obtain an interim injunction. And if the stock of goods which they might then have restrained the defendants from selling, has since been sold, there being nothing at the hearing for the court to restrain the defendants from selling, the court cannot proceed to give further relief by way of account." *S. C.*, 731. Further he said: "It is an unfortunate position for the plaintiffs, but the misfortune arises from their delay in not

filing the bill until their patent had almost expired. Their patent is gone; and whatever may now appear *ex post facto* to have been their rights when they applied for the interlocutory injunction, if at the hearing there is nothing upon which an injunction can operate, the action of the court is stayed and I am bound by the authorities to say, that there being, at the hearing, nothing to which the jurisdiction of equity can attach, the case is reduced to damages, and the bill must be out of court." S. C., pp. 731, 732.

Where a patent obtained in January, 1849, was prolonged five years from its expiration, and the extended term expired on the 12 of January, 1868, a bill filed on the 8 of that month (four days only before the expiration of the patent) was in 1870 dismissed with costs; Sir *W. M. James*, V. C., saying, "The plaintiff must have known that it was utterly impossible he could have obtained any equitable relief before the patent expired." *Betts* v. *Gallars*, L. R., 10 Eq., 392.

In the present case besides that the patent has expired there are other good reasons why an injunction cannot be obtained.

No affidavit having been made by the plaintiffs or either of them at the time of filing their bill (p. 4) or at the time of the application for an injunction (p. 10 and p. 117) or at the hearing of the cause (pp. 150, 151,) there has not been any time at which "according to the course and principles of courts of equity," an injunction could be awarded in this cause.

"*It is incumbent on the party making the application*" for an injunction "*to swear, at the time of making it, as to his belief that he is the original inventor,* for, although when he obtained his patent, he might very honestly have sworn as to his belief of such being the fact, yet circumstances may have subsequently intervened, or information been communicated sufficient to convince him that it was not his own original invention, and that he was under a mistake when he made his previous declaration to that effect."

Such is Lord Eldon's language, in 1817, in *Hill* v. *Thompson*, 3 Meriv., 624; and he was followed by an able successor. Lord *Lyndhurst*, in Dec., 1828, said:

"There can be no doubt that when a party comes for an injunction against the infringement of a patent, he ought to state that he believes, *at the time when he makes the application*, that the invention was new or had never been practiced in this kingdom at the date of the patent. It is not enough that it was believed to be new at the time when the patent was taken out." *Sturz* v. *De La Rue*, 5 Russ., 329.

In 1860 Vice-Chancellor *Kindersley* said:

"I cannot grant an injunction, neither can I grant leave to bring an action unless the plaintiff files an affidavit as to the novelty of the invention and as to the validity of the patent." *Whitton* v. *Jennings*, 1 Drewry & Smale, 111.

Since this case and the decision, a few months later, in *Mayer* v. *Spence* (1 Johnson & Hemmings, 87), of Vice-Chancellor Sir *W. Page Wood* (afterwards Lord *Hatherley*), the practice is considered in England as settled. 1 Drewry & Smale, 112; 2 Dan. Ch. Pract., pp. 1644 & 1670 of Boston edi., 1871.

Moreover, an injunction may properly be refused when there is "considerable doubt upon the question, whether that which is now claimed is a novelty or not" *Collard* v. *Allison*, 4 Mylne & Co., 487, 18 Eng. Ch. R.; or doubt upon the question whether the patent has been infringed or not. It may also be refused on the ground of delay.

In 1839 the Master of the Rolls (Lord *Langdale*) said:

"The usual course being to ask for the injunction as an immediate protection, on interlocutory motion, and the court having then an opportunity of directing such proceedings, if any, as may be required to determine the validity of the patent, it seems that the plaintiff if he omits to move for the injunction at an early period of the cause, first *shews that he does not consider the injunction as immediately necessary* for the protection of his interests *and next imposes upon himself the obligation of making out a clear and unexceptionable title* at the hearing."—"If he fails in that and has not previously obtained an injunction, he will not be allowed to use the facts proven in the cause as ev-

idence of a *prima facie* case." *Bacon* vs. *Spottiswoode*, 1 Beav. 388, 289, 17 Eng. Ch. R.

The decree dismissing the bill was upon an appeal affirmed in 1839 by the Lord Chancellor *Cottenham*. Observing that the plaintiffs knew of the alleged infringement in August, 1835, he said:

"It is no trifling grievance to a defendant to have a chancery suit hanging over him for four years in which if the court shall so determine at the hearing, he will have to account for all the profits he has been making during the intermediate period. Is a defendant to be subject to this annoyance without any absolute necessity, or even any proportional advantage to his adversary, and without that adversary being able to show any reason why he did not apply at an earlier time? It appears to me that it would be very injurious to sanction such a practice-"

The appeal was dismissed with costs. *Bacon* vs. *Jones*, 4 Mylne & Cr., 438, 439, 18 Eng. Ch. R.; cited in 2 Story's Eq. Ch. 33, § 934, p. 122, note 3, edi. 1877. On the ground of delay in making application therefor, the injunction was refused in 1840 in *Lewis* vs. *Chapman*, 3 Beav. 138.

"There are many cases in which it is not clear either that the patent is legally valid or that it has been infringed; it depends on the degree of doubt which exists on these questions, whether the court will grant the *interim* injunction." 845, *Bridson* v. *McAlpine*, 8 Beav., 230. There are other cases in which there has been "very great difficulty from the delay." The doctrine of a court of equity is, "that a party coming for the assistance of this court to protect a legal right, not absolutely established against the party who is alleged to have infringed it, ought to come at an early period." *Bridson* v. *Benecke*, 12 Beav., 3.

II. Adjudication in a Circuit Court of the United States for New York between other parties is not sufficient to authorize an injunction in this cause or to prevent a dismission of the bill.

The defendants cannot be bound by what took place in a cause in which they were not parties, though that cause be as to the validity of the same patent. 1845, *Crosskill* v. *Puxford*, 5 Law Times, 342; Jan., 1848, *Crosskill* v. *Every*, 10 Id., 459. The Master of the Rolls in 1849 (Lord *Langdale*) said:

"I do not think that the defendants in this case are bound by *McAlpine's* case as to any matter which was not strictly brought under the judgment of the court in such a manner as to constitute it an authority like any other authority in the books. I cannot concur with the argument that because the points might have been raised in McAlpine's case, I am therefore to consider the parties in this case are in any way bound by that." *Bridson* v. *Benecke*, 12 Beav., 6.

A similar view is taken by Lord Langdale's successor. In 1866 Lord *Romilly* said:

"The claim of having made an invention is not to preclude others from using an old process and old machines, because some person *bona fide* believes that he has invented what, in truth, has been long known; nor ought the fact that one person has infringed the patent, being ignorant that the discovery of the patentee was not a new one, to preclude another person from shewing that it had before been known and been in use. It may well be that Mr. B. invented the process he has patented, and yet that the same process may have been used by other persons before the date of Mr. B.'s patent, and it would be injustice to stop the use of a process long employed because some other person had subsequently discovered the same process. It would also be unjust, because one person has been unable to prove that the discovery was not new, to prevent another from doing so, and bind him, by a proceeding over which he had no control and of which he knew nothing." *Bovill* v. *Goodier*, 35 Beavan, 430.

The judgment or adjudication of the Circuit Court of the U. S. for a district of New York cannot "affect the rights of any person except the parties to the suit, and those deriving title under them subsequent to the rendition of such judgment." Rev. Stat. of U. S., p. 959, Sect. 4,918. It does not affect the rights of the defendants here; they were not parties to any suit in New York, and do not derive title under any parties thereto. Such adjudication by a circuit

court of the United States, for a district in New York, can have no greater operation than as precedent. 7 Rob. Pract., pp. 1 and 2. As such it is outweighed by subsequent decisions of circuit courts of the United States for other districts—one for the Southern District of Ohio, in 1873–4, by Judge Emmons, in *Ball* v. *Withington, &c.;* the other for the Eastern District of Missouri, in 1877, by Judges Dillon and Treat, in *Garneau* v. *Dozier, etc.* These two decisions were referred to, in brief, in the court below.* So that, now, (with Louisiana added to Ohio and Missouri), there are decisions in three several States against claims under the patent to Hosea Ball.

III. The plaintiffs have no right, whatever, and are entitled to no remedy, whatever, in any court, whether of law or equity. Such is the proper conclusion upon the act of Congress of July 8, 1870 (16 Stat.), under sections 63, 64, 65, 66, and the certificate of Sept. 14, 1870, ante pp. 3, 4, 5. Upon such a question, if we look to principles of general jurisprudence, the solution is plain under the wise rule of the common law of England as to the act "of an inferior tribunal whose judgment does not appear to be within its jurisdiction." 7 Rob. Pract., Ch. 1 & 8, pp. 67 to 78; *Hamlett, &c.*, v. *Com.*, 3 Grat., 86; the rule that "however high the authority to whom a special statutory power is delegated, we must take care that in the exercise of it, facts giving jurisdiction plainly appear, and that the terms of the statute are complied with"; *Christie* v. *Unwin, &c.*, 3 Per.

*Mr. Schmidt, in his brief, mentions on p. 6 "the case of *Hosea Ball* vs. *Withington Langdon; Same* vs. *John Baillie*, reported in the official gazette of the United States Patent Office, of the 29th December, 1874, p. 933;" and says, (p. 7): "the Court, after the most mature deliberation, declared *the re-issue of 1870 void.*"

He also observes (on p. 9) that, "in the case of *Joseph F. Garneau* vs. *Dozier, Weyl & Co.*, tried in the Circuit Court of the United States, for the Eastern District of Missouri, before Judges Dillon and Treat, at the March term of the present year," (1877) it was decided that Ball's patent is *void* for two reasons, to wit—first, *for lack of novelty; and*, second, '*because it is too broad.*'

& Dav., 208; 11 Adol. & El., 373; *Field*, J., in *Galpin* v. *Page*, 18 Wallace, 370, 371; 7 Rob. Pract., p. 20; *Bradley*, J., in *Clinkenbeard* v. *U. S.*, 21 Wallace, p. 70. No farther than they are consistent with the general rule before mentioned, should there, upon the present question, be any regard for cases as to *patents for land*, whether in Virginia, *Witherinton* v. *McDonald*, 1 H. & M., 306; *Alexander* v. *Greenup*, 1 Munf., 134; or in New York, *Jackson* v. *Lawton*, 10 Johns., 23; or in this court, *Field* v. *Seabury*, &c., 19 How., 332.

In accordance with the same general rule are the early decisions of this court as to acts of Congress made in pursuance of that clause of the Constitution of the United States, (Art. 1, § 8, clause 8), which gives Congress power "to promote the progress of science and useful arts by securing, *for limited times*, to authors and inventors, the exclusive right to their respective writings and discoveries." If Hosea Ball ever made a discovery, he had, under an act of Congress, the exclusive right to his discovery, secured to him for the term of fourteen years. After having that right secured him for that limited time, he has endeavored in this suit to maintain a right for a longer time than Congress ever secured, or meant to secure, to him. It never meant that an addition to his term should be secured to him by a certificate issued without authority; and he cannot have such addition, according to decisions made by this court in 1824 and 1829 and 1832, when *Marshall*, C. J., was at its head. *Ex parte Wood*, 9 Wheat., 606, 607; *Pennock*, &c., v. *Dialogue*, 2 Peters, 1. In delivering the opinion of this court, in 1832, as to a patent, *Marshall*, C. J., said:

"The correct performance of all those preliminaries, on which the validity of the original depends," is "always examinable in the court in which a suit for its violation shall be brought. Why may not those points on which the validity of the amended patent depends,

be examined before the same tribunal?" *Grant, &c.* v. *Raymond*, 6 Peters, 242, 243. On another page he says: "The third section requires, as preliminary to a patent, a correct specification and description of the thing discovered. This is necessary in order to give the public after the privilege shall expire the advantage for which the privilege is allowed, and is *the foundation of the power to issue the patent. The necessary consequence of the ministerial character in which the secretary acts is that the performance of the pre-requisites to a patent must be examinable in any suit brought upon it. If the case was of the first impression we should come to this conclusion: but it is understood to be settled.*" S. C., p. 247.

"*Pennock & Sellers* v. *Dialoque*, 2 Peters. 1, was not, it is true, a case of defect in the specification or description required by the third section, but one in which the applicant did not bring himself within the provision of the first section, which requires that before a patent shall issue the petitioner shall allege that he has invented a new and useful art, machine, &c., '*not known or used before the application.*' This pre-requisite of the first section, so far as a failure in it may affect the validity of the patent, is not distinguishable from a failure of the pre-requisites of the third section." S. C., p. 248.

The rule of this case was affirmed in the opinion of this court delivered at Jan. Term 1833, in *Shaw* v. *Cooper*, 7 Peters, 215. Of the patentee's right *McLean*, J., said: "It is founded exclusively on statutory provisions. Vigilance is necessary to entitle an individual to the privileges secured under the patent law. It is not enough that he should show his right by invention; but *he must secure it in the mode required by law.*" *Shaw* vs. *Cooper*, 7 Peters, 319. "The patent law was designed for the public benefit as well as for the benefit of inventors. For a valuable invention, the public, *on the inventor's complying* with certain conditions give him, for a limited period, the profits arising from the sale of the thing invented. S. C., 320.

"It is undoubtedly just that every discoverer should realize the benefits resulting from his discovery for the period contemplated by law. But these *can only be secured by a substantial compliance with every legal requisite.* His exclusive right does not rest alone upon his discovery, but also upon the legal sanctions which have been given to

it, and the forms of law with which it has been clothed." S. C., 7 Peters, 320.

"*The same evidence which should defeat his application for a patent would, at any subsequent period, be fatal to his right.* The evidence he exhibits to the department of State is not only *ex parte* but interested; and the questions of fact are left open, to be controverted by any one who shall think proper to contest the right under the patent." S. C., 7 Peters, 321.

Some years after the death of *Marshall*, C. J., language not entirely consistent with previous decisions was used in 1840 by *Story*, J., in *Phila. & Trenton Railroad Co.* v. *Stimpson*, 14 Peters, 458; and in 1846 by *McLean*, J., in *Stimpson* v. *West Chester Railroad Co.*, 4 How., 403, 404; and in 1869 *Swayne*, J., delivered the opinion of the court in *Rubber Co.* v. *Goodyear*, 9 Wallace, 797. There is not in the opinion of the court in any of these three cases any reference to its opinion in the cases of *Grant* v. *Raymond*, 6 Peters, 242, or in *Shaw* v. *Cooper*, 7 Id., 314. All of these cases may, as regards the present question, be disposed of with the observation that under the act of Congress of July 8, 1870, mentioned in the certificate of September 14, 1870, p. 20, that certificate is on its face without authority or jurisdiction, and therefore is void.

IV. When the patentee seeks to enforce his patent, he is liable to be defeated by proof that he did not make the invention. The judgment of the Commissioner does not protect him against such evidence. *Richendorfer* v. *Faber*, 92 U. S. (2 Otto) 351. His patent is void for want of novelty. *Rubber-coated Harness Trimming Co.* v. *Welling*, 97 U. S. (7 Otto) 7.

Though on the one hand "patent rights should be preserved and protected for those who introduce really valuable inventions and improvements," yet on the other hand, the public "should not be hampered by persons taking out patents for frivolous articles; patents for things which are

not properly the subject of a patent, but merely for the employment of a different material in order to produce the same result. *Malin's* V. C. in 1870 in *Rushton* v. *Crawley*, L. R. 10 Eq. 527.

It is observed that "there is a considerable portion of the public who are very much alarmed by the claims of patentees and would rather submit to those claims than be exposed to a troublesome and expensive litigation." L. R. 10 Eq. 527. In 1870 in a case wherein the plaintiff made claim to the use of wool in things which it had been common to make from wool for fourteen years, Sir R. Malins, V. C. said:

"Can anything be more unjustifiable under these circumstsnces than that a man, because he introduces what he thinks is a new article, *without inquiry*, to rush to the Patent Office and take out a patent and make an extensive specification and thereby embarrass the conduct of trade so that these gentlemen, the defendants, find themselves interrupted in the course of their business by a bill filed against them and are dragged into the Court of Chancery and put to very considerable expense, and all because the plaintiff has chosen to speculate upon the forbearance of the public, and has taken out a patent for that which is not properly the subject of a patent."—"It is a gross violation of the privilege conferred upon inventors for a person to take out a patent for a known article which has been used for years, because he finds he can produce a thing cheaper or better by a new material, or to suppose that directly he uses the new material, it can be a subject for a patent. Suppose any one should discover some other well known material for making these things such as paper, is he to take out a patent for it? and afterwards some one else should find out they could be made of straw, is he also to have a patent? So far as my opinion goes, and I desire it to be distinctly understood, the use of a new material to produce a known article, is not the subject of a patent but there must be some invention, something really new, something more valuable to the public than the simple use of a new material to produce a known article." *Rushton* v. *Crawley*, L. R. 10 Eq. 527, 528.

Of that which is mentioned in the patent of Nov. 23, 1856, we insist there was not such invention or discovery by

Hosea Ball as entitled him to the right claimed under that patent. *Hotchkiss, &c.*, v. *Greenwood, &c.*, 11 How., 266; *Burr* v. *Duryee*, 1 Wallace, 570, 571; *Case* v. *Brown*, 2 Id., 320; *Hicks* v. *Kelsey*, 18 Id., 670; or under the re-issue of Oct. 12, 1869, or June 14, 1870. *Seymour* v. *Osborne*, 11 Id., 544; *Carlton* v. *Bokee*, 17 Id., 463.

"A mere carrying forward, or new or more extended application of the original thought, a change only in form, proportion or degree, the substitution of equivalents, doing substantially the same thing in the same way by substantially the same means with better results, is not such invention as will sustain a patent. These rules apply alike, whether what preceded was covered by a patent or rested only in public knowledge and use. In neither case can there be an invasion of such domain and an appropriation of anything found there. In one case everything belongs to the prior patentee; in the other, to the public at large." *Swayne*, J., delivering opin. of court, in 1874, in *Smith* v. *Nichols*, 21 Wallace, 118, 119; affirmed, in 1875, in *Roberts* v. *Ryder*, 91 U. S. (1 Otto), 139; *Seawall* v. *Jones*, Id., 180; *Cohn* v. *U. S. Corset Co.* (in 1876), 93 U, S. (3 Otto), 366.

V. In 1864 the Lord Chancellor *Westbury* laid down the rule, as consistent with, and, in reality, a mere sequence from the decided cases.

"That in a patent for an improved arrangement, or new combination of machinery, the specification must describe the improvement and define the novelty otherwise, and in a more specific form, than by the general description of the entire machine: it must, to use a logical phrase, assign the *differentia* of the new combination." He said: "This obligation flows directly from the condition of the patent; it is part of the condition of the patent that the specification shall particularly describe and ascertain the invention." *Foxwell* v. *Bostock, &c.*, 4 De Gex., Jones & Smith, 313, 314.

"The public must be told, in very distinct language, in every specification, what are the articles they may use and what they may not use. Therefore, if a man makes a discovery, and instead of limiting himself in his specification to that which properly is the discovery (if it be one), makes his specification too extensive, and claims more than he is

entitled to claim, that is calculated to embarrass the public, and is "a fatal objection to the patent." *Malins*, V.-C., in 1870, in *Rushton* v. *Crawley*, L. R., 10 Eq., 527.

On Hosea Ball's application for the patent of Sept. 23, 1856, his claim is (p. 145) stated thus:

"What I claim and desire to secure by letters-patent is the perforated interior chamber in combination with the rotary reel and the swinging platforms therein, self-discharging, substantially as set forth."

On his application for the re-issue of October 12, 1869, he claims, pp. 147, 148:

1. "One or more swinging bread-holders suspended from the arms or end-plates of a *rotation* reel, in combination with a furnace so arranged and connected that the products of combustion will pass into or through the chamber within which the bread-holders move.

2. "In combination with a rotating wheel and swinging bread-holders, a flue *around* the chamber in which the reel rotates and communicating with said chamber through *perforations* in the wall between them.

3. In combination with a swinging bread-holder revolving in an oven a discharging chute and tripping device by which the bread is delivered from its platform and into the chute, substantially as and for the purposes described."

On the application for the re-issue of June 14, 1870, the claims, p. 150, are:

1. Repetition of 1st claim in specification of 1869, except that for *rotation* is to be read *rotating*.

2. "In combination with a rotating reel and swinging bread-holders, a flue *on one or more sides of* the chamber which the reel rotates, communicating with said chamber through *apertures* in the wall between them.

3. Repetition of 3d claim in specification of 1869.

VI. As to a re-issue the act of 1836, as well as that of 1870, restricted the power of the Commissioner to 'the same invention' which was the subject of the original patent. *Richendorfer* v. *Faber*, 92 U. S. (2 Otto), 354. His authority being limited to a re-issue for the same invention

as that embraced in the original patent, a re-issue for anything more is necessarily inoperative and void. *Russell* v. *Dodge*, 93 U. S. (3 Otto), 469; *Railway Co.* v. *Sayles*, 97 U. S. (7 Otto), 563. In *1878*, Bradley, J., delivering the opinion of the court, said:

> "The specification may be amended so as to make it more clear and distinct; the claim may be modified so as to make it more conformable to the exact rights of the patentee; but the invention must be the same. So particular is the law on this subject that it is declared that 'no new matter shall be introduced into the specification.' The prohibition is general relating to all patents; and by 'new matter' we suppose to be meant new substantive matter such as would have the effect of changing the invention, or of introducing what might be the subject of another application for a patent." *Powder Co.* v. *Powder Works*, 98 U. S. (8 Otto) 138.

VII. Infringement of the patent to Hosea Ball is not shewn by such evidence as the complainants have adduced, p. 121 as to the patent of October 11, 1876 to James Hall, pp. 27 to 29 and pp. 140 and 141 and that of June 6, 1871, to Donald McKenzie pp. 25 to 27. It is not enough to argue on behalf of the plaintiffs that each of the patents to Hosea Ball was "issued after an inquisition or examination made by skilful and sworn public officers appointed for the purpose of protecting the public against false claims or useless inventions." The same may with no less truth be said of the patent to James Hall; and that to Donald McKenzie,, with the additional and important fact that the patent to Hall and that to McKenzie being both issued after the act of Congress of July 8, 1870, were each for the term of seventeen years and have remained in force while every one of the three patents to Hosea Ball has expired. Supposing for the sake of argument that a patent may be "received as *prima facie* evidence of the truth of the facts asserted in it," and in some cases may have weight with a jury,this court has said:

"If so, it is not easy to perceive why the defendant who uses a patented machine should not have the benefit of a like presumption in his favour arising from a like investigation of the originality of his invention and the judgment of the public officers that his invention is new and not an infringement of the patent previously granted to the plaintiff. It shews at least that the defendant has acted in good faith and is not a wanton infringer of the plaintiff's rights." *Corning, &c.* v. *Burden*, 15 How. 271

Moreover, although in some cases in this court, it has been said "that a patent is *prima facie* good; yet in England in 1872 Sir *R. Malins*, V.-C., said: "This cannot be so; for the rule is that where letters-patent have been recently granted, an injunction will not be granted till the right has been established." *Rollins* v. *Hinks*, L. R. 13 Eq. 361.

However this may be, this court has said: "Every man has a right to make an improvement and evade a previous patent, provided he does not invade the rights of the patentee." *Burr* v. *Duryee*, 1 Wallace, 574.

We insist there has been no invasion of any right of Hosea Ball or his assignee;—no infringement by the defendants of any right under any patent to him. *Prouty, &c.*, v. *Ruggles, &c.*, 16 Peters., 336; *Brocks, &c.*, v. *Fiske, &c.*, 15 How., 221, 222; *McCormick* v. *Falcott, &c.*, 20 Id., 405. In 1861 infringement of a patent for improvement in cooking stoves was not shewn in *Vance* v. *Campbell, &c.*; 1 Black., 428. The case of *Prouty & Mears* v. *Ruggles, &c.*, 16 Peters., 340, was recognized, in 1863, in *Earnes* v. *Godfrey*, 1 Wallace, 79. In the same year this court said:

"No part of the patent which is valid has been used by defendants, and they cannot be made infringers by an argument that mingles the valid and invalid parts of a patent and calls it a unit; and then claims that the defendants are infringers because they have used one part of this unit, although it is a part as to which the patent is void." *Miller*, J., in *Jones* v. *Morehead*, 1 Wallace, 164.

McCormick v. *Talbot* was followed, in 1863, in *Burr* v.

Duryee, 1 Wallace, 573; this court saying "that the machine of B. is not an infringement of the invention of W; and if it be an infringement of the re-issued patent, that patent is void." S. C., 577; in 1864 was *Case* v. *Brown*, 2 Wallace, 320; in 1869, *Stimpson* v. *Woodman*, 10 Id., 120; in 1872, *Gould* v. *Rees*, 15 Id., 187; in 1873, *Washing Machine Co.* v. *Tool Co.*, 20 Id., 342, and *Hailes* v. *Van Wormer*, Id., 353. In 1876 it was regarded as settled law that where the respondent in constructing his machine omits one of the ingredients of the complainant's combination, he does not infringe the complainant's patent. *Dunbar* v. *Myers*, 94 U. S., (4 Otto) 201, 202; *Fuller* v. *Yentzer*, Id. 97.

In England, since *Curtis* vs. *Platt*, L. R., 3 ch. Div., p. 135 to 140, the decision of the Queen's Bench, affirmed by the Exchequer Chamber, in *Lister &c.*, vs. *Leather*, 8 El., & Bl., 1004, 92 Eng., L. has been much considered. In 1869, Sir *W. M. James*, V. C., said:

"The authority of that case has been pressed upon me as if it really established this, which would be a most startling proposition, that a patent for a combination or arrangement would be a distinct patent for every thing that was new and material, and that went to make up the combination. The marginal note, if read hastily, is calculated to give some colour to that contention. But if the judgment be read it will be found to give no warrant whatever for such, I must call it, baseless notion. The law is summed up thus :—the cases establish that a valid patent for an entire combination for a process gives protection to each part thereof that is new and material for that process, which is really nothing more than stating in other words that you not only have no right to steal the whole, but you have no right to steal any part of a man's invention ; and the question in every case is a question of fact—is it really and substantially a part of the invention ?—

"I am clearly of opinion that there can be no patent right in the substitution of a slide for a hinge, whether applied to the door of a house or the door of a carriage, or the door of a lamp or lantern, whether large or small, suspended or not suspended. It was hardly contended before me that the introduction of that alone would have been sufficient to sustain a patent, but it was gravely contended that because it

was, as alleged, a novel part of a novel combination and arrangement, it was protected. To say that a patent for an entire combination is a valid patent for a part, when that part would not have itself been patentable, is, in my judgment, a *reductio ad absurdum* of the supposed principle of *Lister* vs. *Leather*." *Parkes* vs. *Stevens*, L. R., 8 Eq., 366 to 368; affirmed by Lord-Chancellor *Hatherley* in 5 Ch., App. 36.

After Sir *W. M. James* became one of the Lord Justices the subject was before him in 1875; and *Parkes* v. *Stevens* was followed; Vice-Chancellor *Bacon's* decree for an injunction was reversed; and the bill dismissed in *Clark* v. *Adie*, L. R., 10 Ch. Ap., 667.

CONWAY ROBINSON
WITH
LEIGH ROBINSON,
Counsel for Appellees.

JANUARY, 1880.

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1879

Filed

Jan. 12. 1880

12-132 Submitted

TRANSCRIPT OF RECORD.

SUPREME COURT OF THE UNITED STATES.

No. 1029.

JOSEPH M. FRENCH, PLAINTIFF IN ERROR,

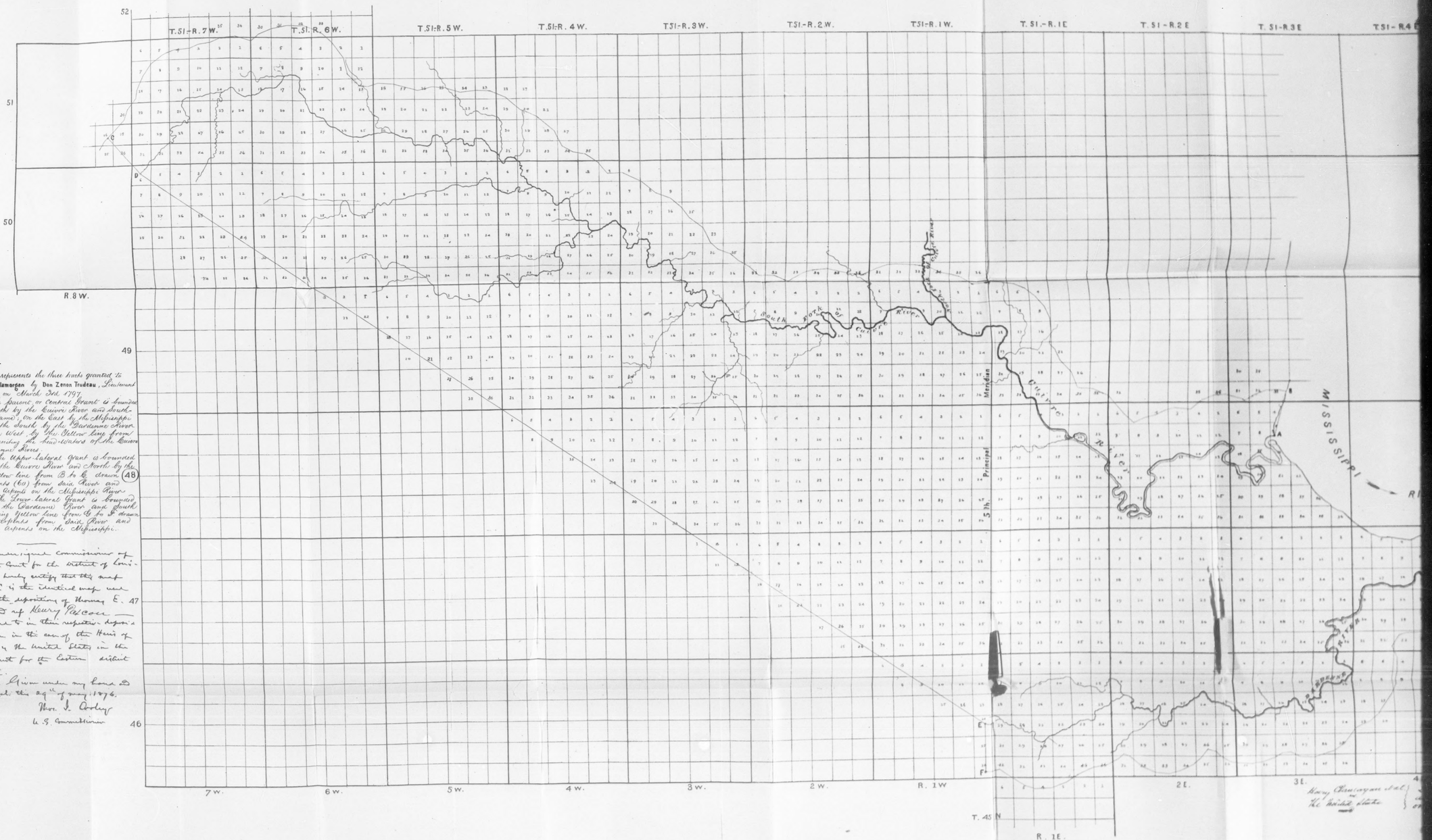
vs.

MARGARET A. WADE, WIDOW OF THE LATE HENRY F. WADE, JR., NATURAL TUTRIX OF HER MINOR CHILDREN PHILIP D. WADE ET AL.

IN ERROR TO THE CIRCUIT COURT OF THE UNITED STATES FOR THE DISTRICT OF LOUISIANA.

FILED OCTOBER 27, 1879.

Examine.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Mississippi River
Bayou Lafourche
Bayou Terrebonne
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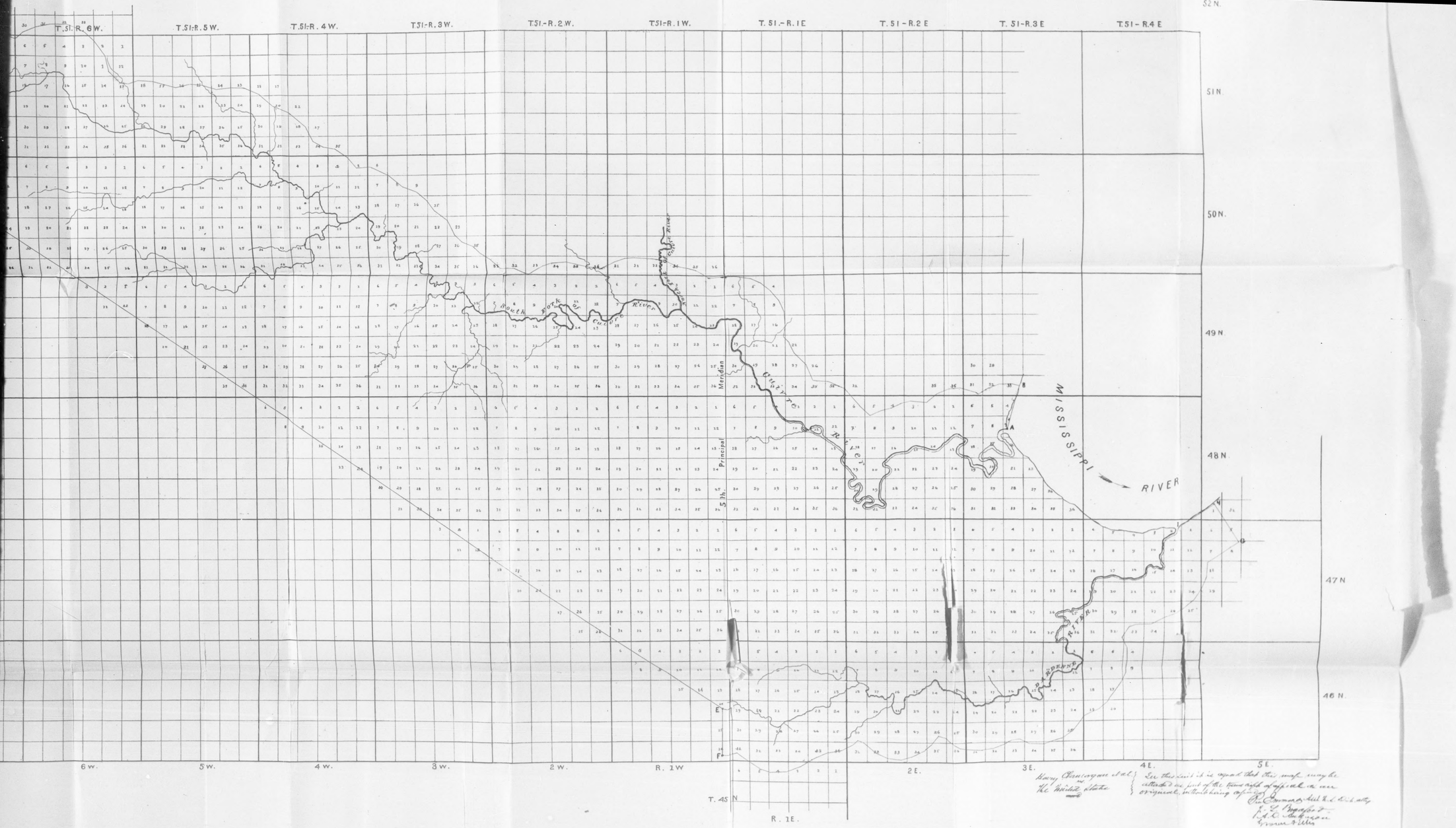
Bayou Du Large
Bayou Du Large



Henry Champagne et al. vs. The United States

See the case it is agreed that this map may be attached to and part of the transcript of appeal in case original, but nothing appearing upon it

Jno. Sommerville U.S. Dist. Atty.
F. L. Higginbotham
E. A. C. Anderson
Counsel for Claim

R.1W. R.1E. R.2E. R.3E. R.4E. R.5E.

T.50N.

T.49N.

T.48N.

T.47N.

T.46N.

T.45N.

Principal Meridian

South Fork of Coquille River

Coquille River

Coquille River

Coquille River

Mississippi River

Mississippi River

Durdenne River

A

B

C

D

E

F

G

H

Henry Clay Dean et al
vs
The United States
H. T. Blow et al
Marked Plates

Plan H

Filed 19 March 1875
Joseph H. Clark
Clk

Plan H
constructed by S Pittman
and referred to as ~~Plan~~ Plan H
in the stipulations of the parties.

It is agreed that this map may be attached as an original to the transcript of appeal with out the necessity of having copied a part thereof.
Wm. Somers
Asst U.S. Dist Atty
J. G. Bagstone
Solr for defendants
Copy filing for H. T. Blow et al

Plan I

referred to

in the stipulation

Henry Clamorgan et al —

vs —

The United States —

It is agreed in this case that this map may be attached as an original to the transcripts of appeal without being copied therein —

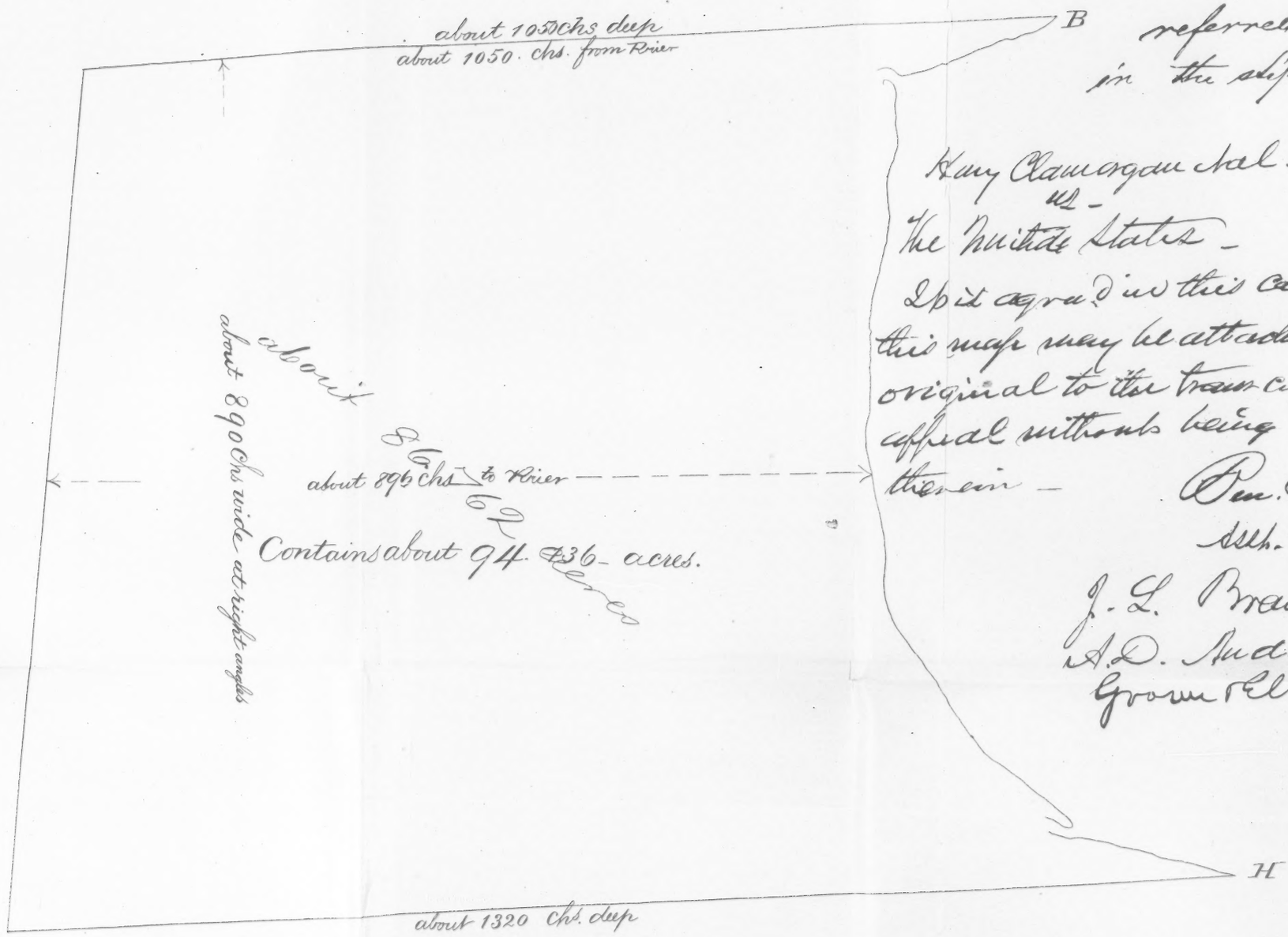
Wm. Emmons

Asst. U.S. Atty

J. L. Bradford

A. D. Anderson

Gorman & Ellis



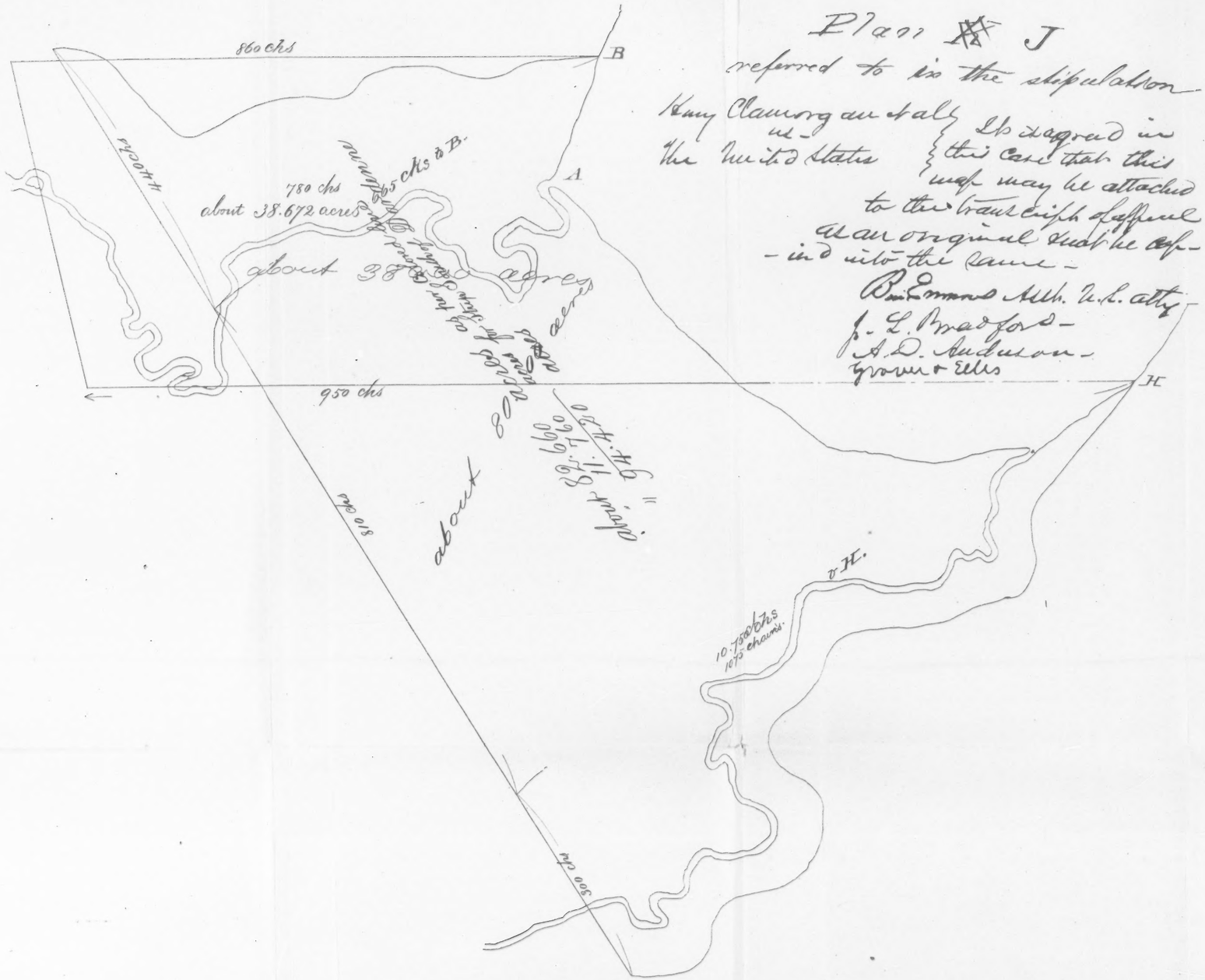
Contains about 94. 736- acres.

Plan ✱ J

referred to in the stipulation

Henry Clamorgan et al } It is agreed in
vs } this case that this
The United States } map may be attached
to the transcript of appeal
as an original but be copied
into the same

B. F. Edmonds Atty. U.S. atty
J. L. Bradford
A. D. Anderson
Brower & Ellis

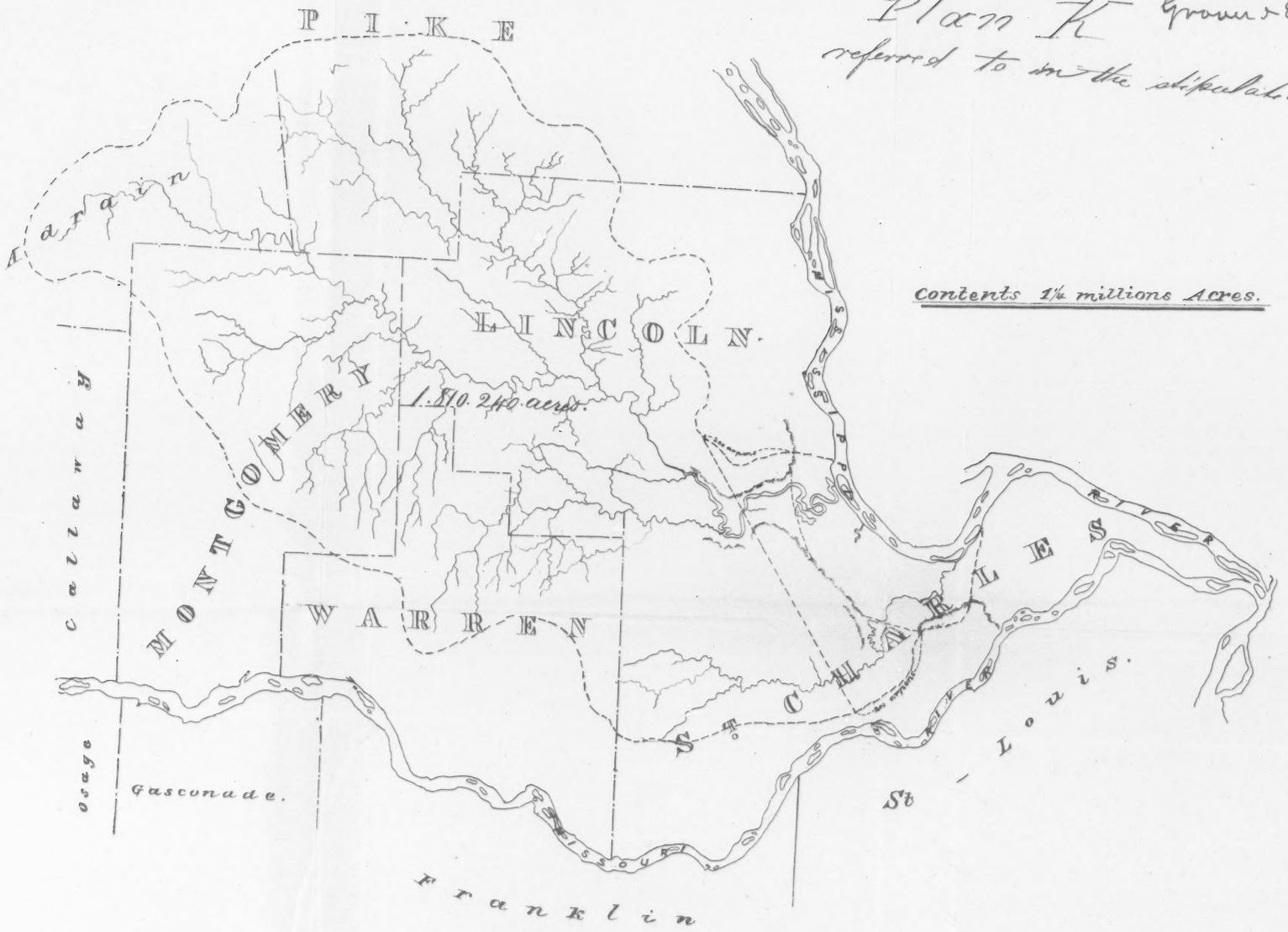


Kay Clamorgan et al
vs
The United States

It is agreed that this map may be attached to the transcript of appeal as an original and the same copied into the same

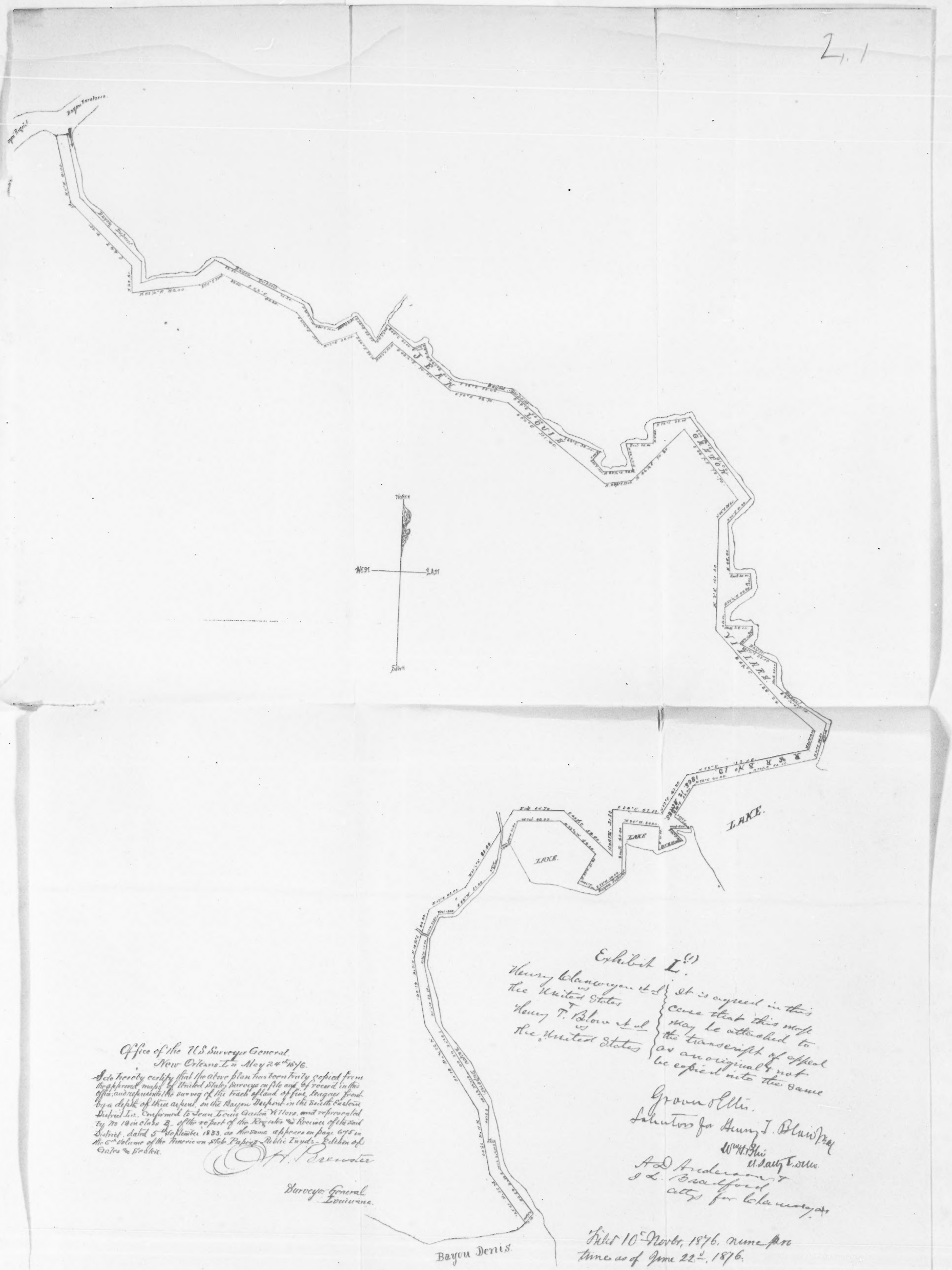
Wm Emmons Asst. U.S. Atty
J. L. Bradford
A. D. Anderson
Brown & Ellis

Plan K
referred to in the stipulation



Contents 1½ millions Acres.

2.1


Bayou Teraloree
Bayou Royal
Bayou Belgarde
Bayou Belgarde
Bayou Belgarde

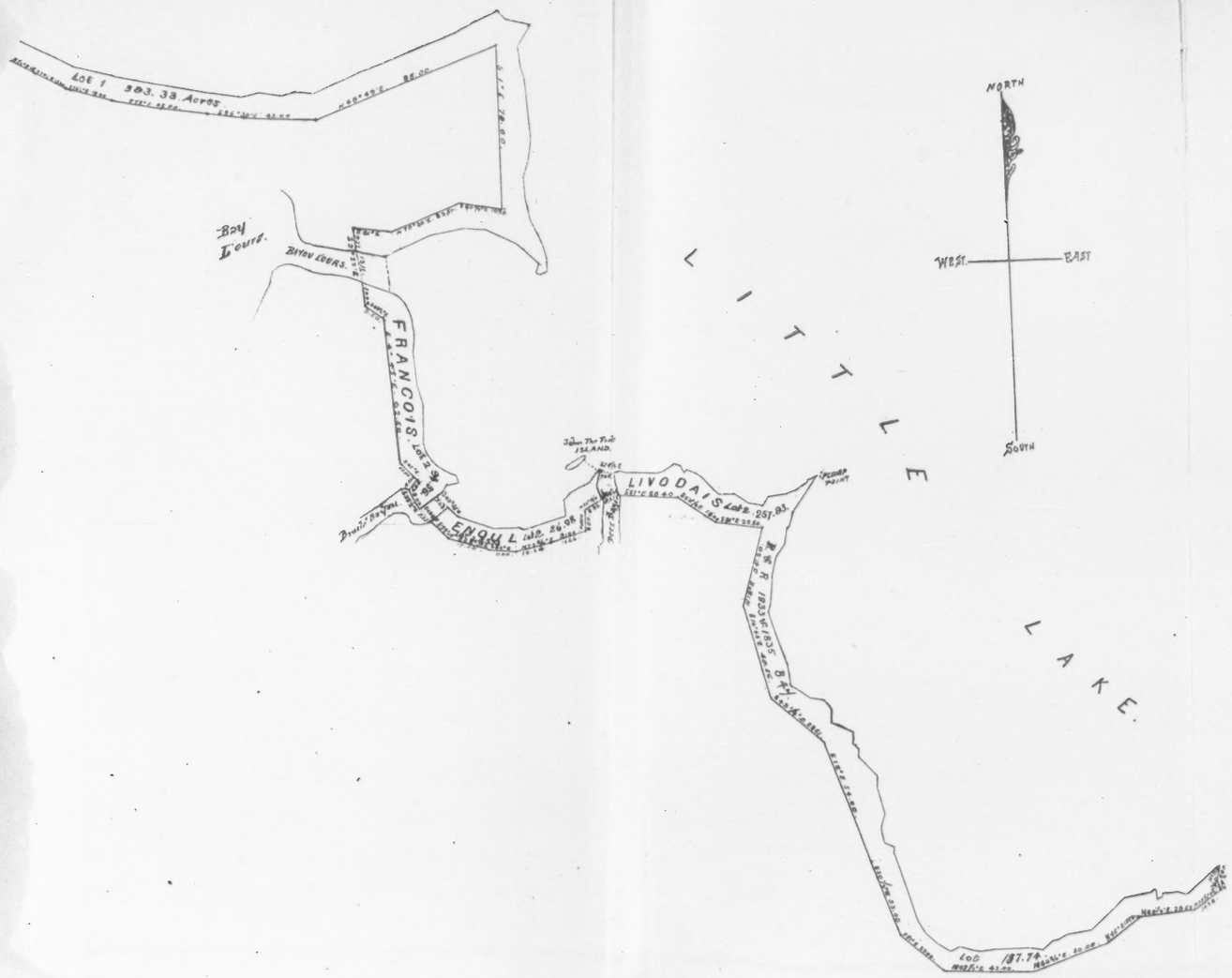


Exhibit L (2)

Henry Clamorgan et al
vs
The United States
vs
Henry T. Blow et al
vs
The United States.

It is agreed in this case that this map may be attached to the transcript of appeal as an original & not be copied into the same —

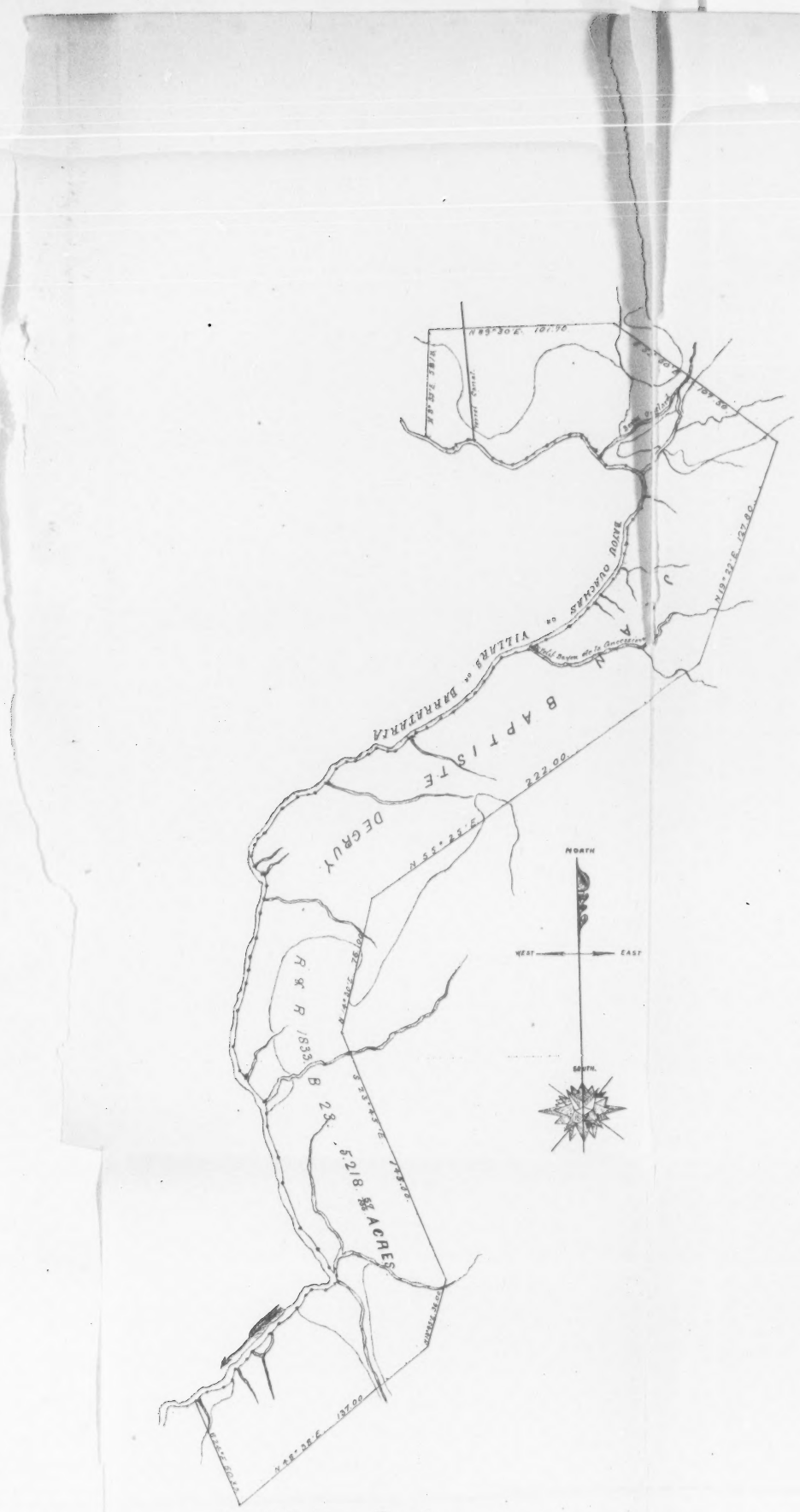
Brown & Ellis
Solicitors for H. T. Blow et al
Wm. H. Blair
U. S. Atty & Solr

A. D. Anderson &
I. L. Bradford
atty's for Clamorgan ...

Office of U. S. Surveyor General
New Orleans La. May 24th 1876.

I do hereby certify that the above plan has been truly copied from the approved maps of United States surveys on file and of record in this office and represents the survey of the "Little Lake" in the Parish of Iberia a body of water about a half leagues South by West from Point Enoul Livaudais and represented by No 47 in the Draft of land of three miles square in Township 13 South of Range 6 East of the Southeastern District La, transmitted to Francois

L 3



Office of U.S. Surveyor General
New Orleans La May 24th 1876.

I do hereby certify that the above Plan has been truly copied from the approved Maps of United States Surveys on file and of record in this Office and represents the survey of the four leagues front with the depth of 20 arpens on the left side of Bayou Barataria in the South Eastern District La. confirmed to Jean Baptiste De-Cuir & representing by the No 23 in the Class B of the 20th Park of the Register & Receiver for said district of 3d September 1833. as the same appears on page 675 in the 6th Volume of American State Papers - Public Lands - Edition of Gales & Seaton. —

J. H. Brewster

Surveyor General.
Louisiana.

Exhibit L (3)

Henry Clanmorgan et al
The United States
Henry T Blow et al
The United States.

It is agreed in this cause that this map may be attached to the transcript of appeal as an original & not be copied into the same

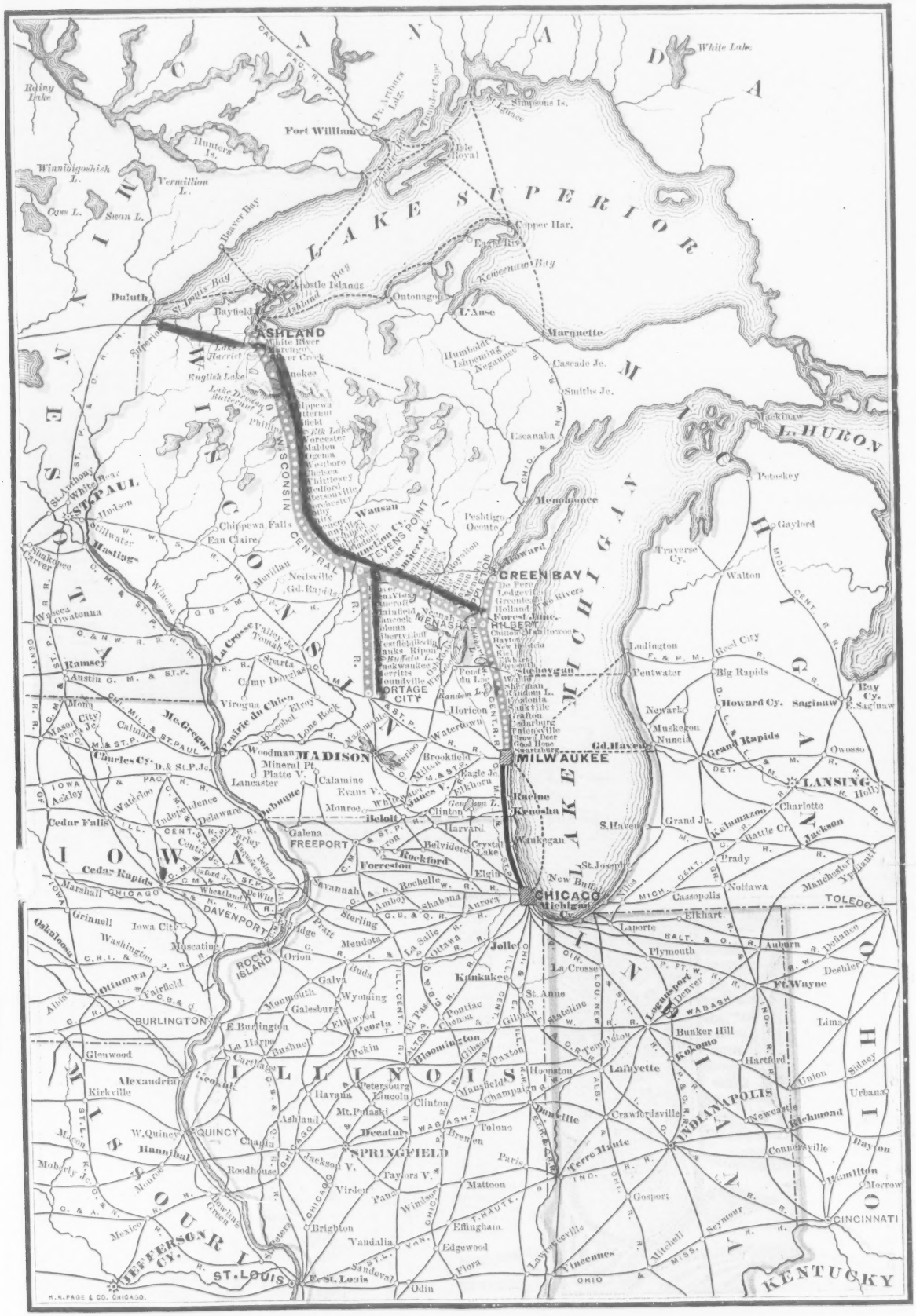
Grauer & Ellis
Solicitors for Henry T. Blow et al
W. H. Blair
U. S. Atty & Solr
A. D. Anderson &
J. L. Bradford
attys for Clanmorgan

Filed Nov 12. 1876
as of June 22. 1876
nunc pro tunc
Joseph H. Clark
Clerk.

MAP SHOWING THE

Wisconsin Central R. R. and its Connections

WITH OTHER RAILROAD AND STEAMBOAT LINES.


CANADA
MINNESOTA
WISCONSIN
IOWA
ILLINOIS
MICHIGAN
INDIANA
OHIO
KENTUCKY
LAKE SUPERIOR
LAKE MICHIGAN
L. HURON
Rainy Lake
Winnibigoshish L.
Cass L.
Swan L.
Vermillion L.
Hunters Is.
Fort William
Pt. Arthurs Landg.
Thunder Cape
Simpsons Is.
White Lake
Isle Royal
Copper Har.
Eagle Riv.
Keweenaw Bay
Beaver Bay
St. Louis Bay
Duluth
Bayfield
Apostle Islands
Ashland
Ontonagon
L'Anse
Marquette
ASHLAND
White River
Florence
Flambeau
Lake Harriet
Beaver Creek
Anokee
English Lake
Lake Deadon
Butternut L.
Chippewa
Butternut
Athelstane
Phillips
Fifield
Fifth Lake
Worcester
Malden
Agenda
Leechford
Thirteenth
Bedford
Nelsonville
Merrillsville
Athens
Wausau
Stevens Point
Humboldt
Ishpeming
Negaunee
Escanaba
Cascade Jc.
Smiths Jc.
Menominee
Peshtigo
Oconto
Mackinaw
Petoskey
Gaylord
Traverse Cy.
Walton
Howard
GREEN BAY
De Pere
Ledgeview
Greenleaf
Holland
Two Rivers
Forest Home
Hilbert
Chilton
Stockbridge
Kiel
Plymouth
Sheboygan
Pentwater
Ludington
Reed City
Big Rapids
Howard Cy.
Saginaw
Bay Cy.
E. Saginaw
Newaygo
Muskegon
Nunica
Grand Rapids
Gd. Haven
Owosso
DET. & M. R.
LANSING
Holly
Charlotte
Battle Cr.
Jackson
Kalamazoo
Grand Jc.
S. Haven
Prady
Nottawa
Cassopolis
Manchester
Ypsilanti
TOLEDO
Elkhart
Laporte
Plymouth
Auburn
Defiance
Deshler
Ft. Wayne
Bunker Hill
Kokomo
Hartford
Lima
Sidney
Urbana
Union
Richmond
Newcastle
INDIANAPOLIS
Connersville
Bayton
Hamilton
Morrow
CINCINNATI
Lafayette
Hoopston
Champaign
Danville
Crawfordsville
Terre Haute
Gosport
Seymour
Mitchell
Vincennes
Lawrenceville
Effingham
T. Haute
Mattoon
Paris
Tolono
Brenton
Windsor
Pana
Virden
Jacksonville
Payson
Springfield
Decatur
Mt. Pulaski
Ashland
Petersburg
Lincoln
Clinton
Havana
Mansfield
Pontiac
Chenoa
Gilman
Bloomington
Gilson
Parton
Pekin
Bushnell
Carthage
Galesburg
Monmouth
Wyoming
Galva
Kirkville
Alexandria
Gleenwood
Iowa City
Grinnell
Washington
Muscatine
Oskaloosa
Ottumwa
Fairfield
Albia
BURLINGTON
E. Burlington
La Harpe
Orion
Buda
Geneseo
Atkinson
Sterling
Mendota
La Salle
Ottawa
Joliet
Kankakee
Pratt
Edge
Rock Island
DAVENPORT
Wheatland
De Witt
Clinton
Lyons
Fulton
Savanna
Amboy
Rochelle
Shabona
Aurora
Elgin
Belvidere
Crystal Lake
Waukegan
CHICAGO
Michigan Cy.
New Buffalo
St. Joseph
La Crosse
Plymouth
Logansport
Denver
Peru
Galesburg
Monmouth
Wyoming
Galva
Kirkville
Alexandria
Gleenwood
Iowa City
Grinnell
Washington
Muscatine
Oskaloosa
Ottumwa
Fairfield
Albia
BURLINGTON
E. Burlington
La Harpe
Orion
Buda
Geneseo
Atkinson
Sterling
Mendota
La Salle
Ottawa
Joliet
Kankakee
Pratt
Edge
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DAVENPORT
Wheatland
De Witt
Clinton
Lyons
Fulton
Savanna
Amboy
Rochelle
Shabona
Aurora
Elgin
Belvidere
Crystal Lake
Waukegan
CHICAGO
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New Buffalo
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Plymouth
Logansport
Denver
Peru
Cedar Rapids
Marshall
Grinnell
Iowa City
Washington
Muscatine
Oskaloosa
Ottumwa
Fairfield
Albia
Cedar Falls
Waterloo
Independence
Delaware
Oelwein
Manchester
Dubuque
Galena
FREEPORT
Forreston
Rockford
Belvidere
Crystal Lake
Harvard
Beloit
Janesville
Clinton
Monroe
Calamine
Evans V.
Platte V.
Lancaster
Mineral Pt.
Woodman
MADISON
Brookfield
Eagle Jc.
Elkhorn
Racine
Kenosha
MILWAUKEE
Watertown
Horicon
Waterloo
Portage City
Randolph
Pennsylvania
Columbus
Beaver Dam
Fox Lake
Oakfield
Ripon
Berlin
Princeton
Green Lake
Dodge Cy.
Fond du Lac
Ashford Jc.
Campbellsport
Kewaskum
West Bend
Hartford
Slinger
Pewaukee
Waukesha
Menomonee
Wauwatosa
Milwaukee
Racine
Kenosha
Waukegan
Lake Forest
Highland Park
Evanston
Chicago
Michigan Cy.
New Buffalo
St. Joseph
La Crosse
Plymouth
Logansport
Denver
Peru
Prairie du Chien
Virogua
Camp Douglas
Sparta
La Crosse
Tomah
Valley Jc.
Elroy
Lone Rock
Mazomanie
Prairie du Sac
Baraboo
Reedsburg
Wisconsin Dells
Portage
Columbus
Beaver Dam
Fox Lake
Oakfield
Ripon
Berlin
Princeton
Green Lake
Dodge Cy.
Fond du Lac
Ashford Jc.
Campbellsport
Kewaskum
West Bend
Hartford
Slinger
Pewaukee
Waukesha
Menomonee
Wauwatosa
Milwaukee
Racine
Kenosha
Waukegan
Lake Forest
Highland Park
Evanston
Chicago
Michigan Cy.
New Buffalo
St. Joseph
La Crosse
Plymouth
Logansport
Denver
Peru
Hastings
Red Wing
Wabasha
Winona
Lake City
Wacoota
Owatonna
Ramsey
Austin
Mona
Mason City
Calumet
Charles Cy.
Dubuque

No. 233.
Parkes et al
v. Page 386
Boyd et al

Fig 3

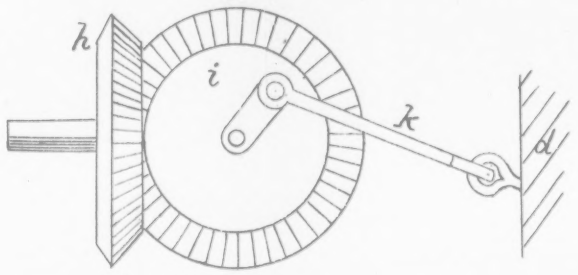
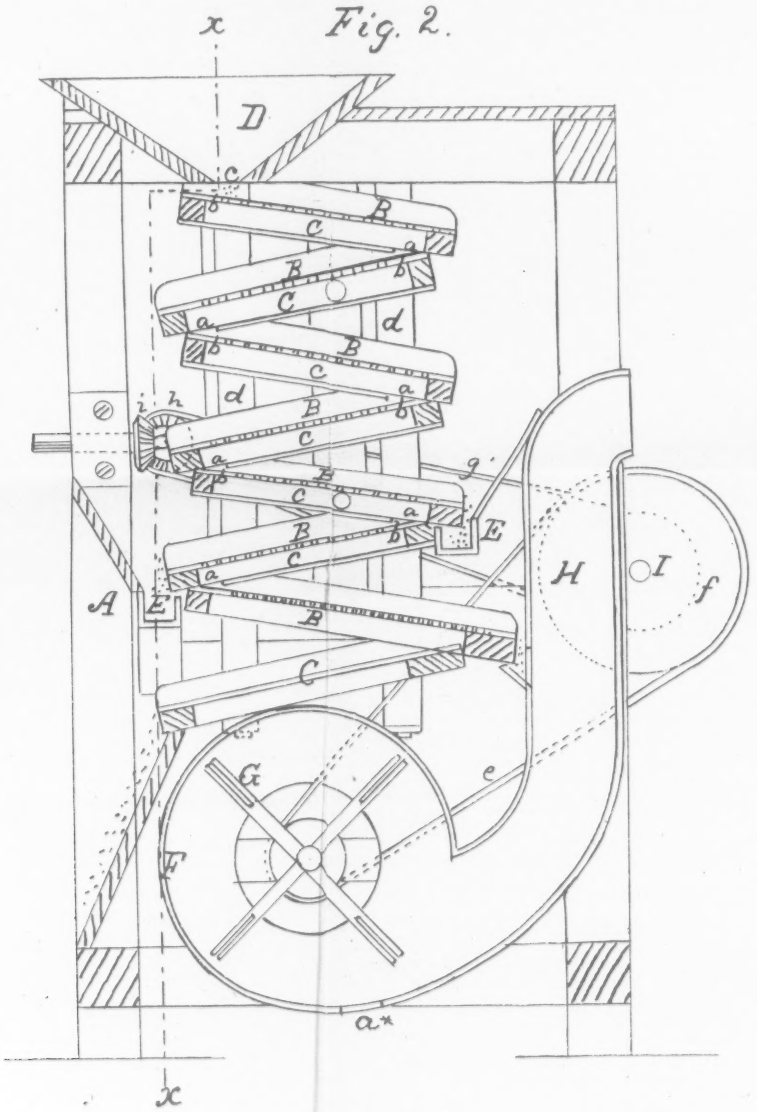


Fig. 2.

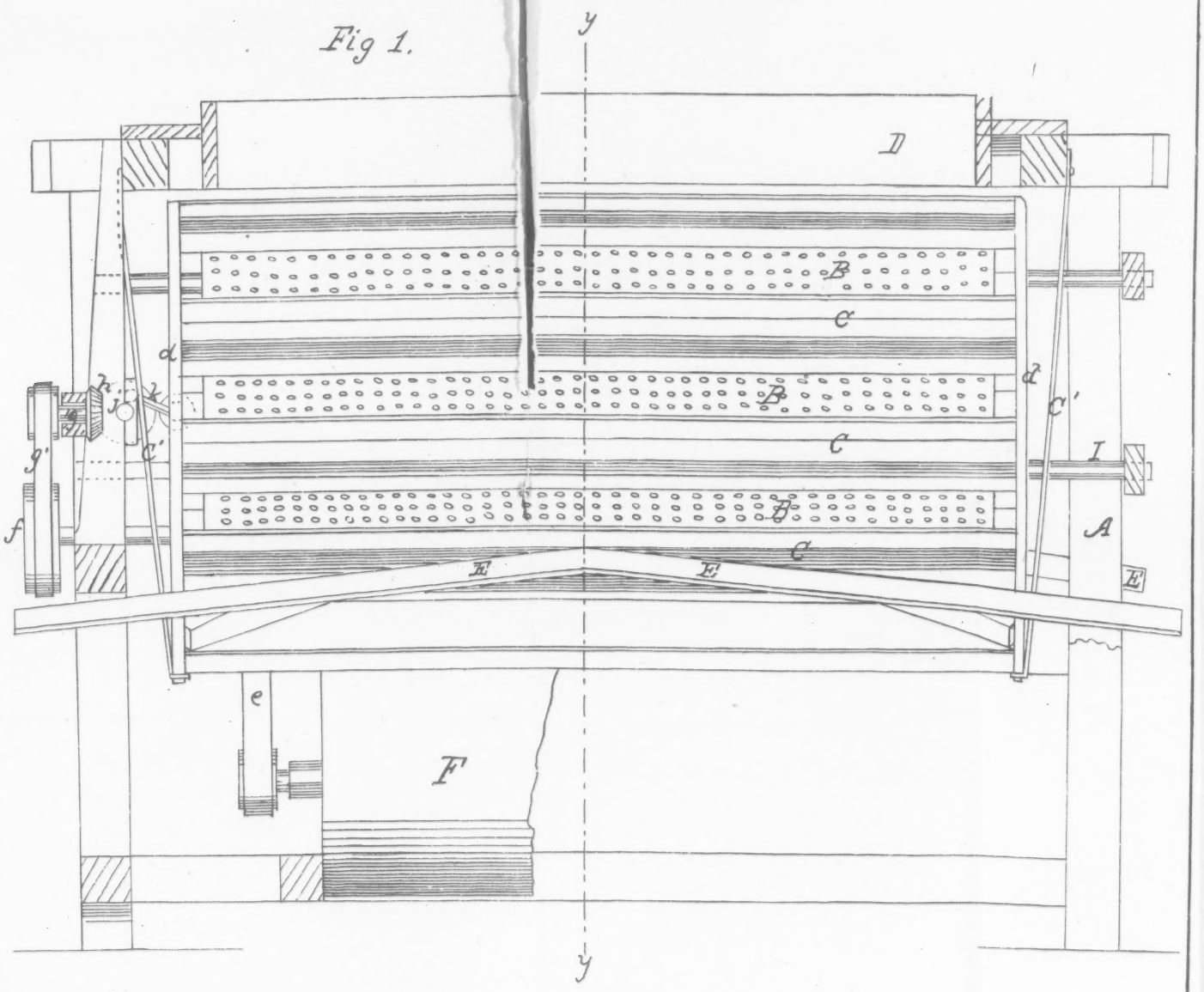


Sheet 1.

J. L. Booth
Impd Grain Separator
Reissued Nov 29. 1864
No. 1826

No. 233.
Parks et al
v.
Booth
page 386

Fig 1.



J. L. Judson
Junius Judson

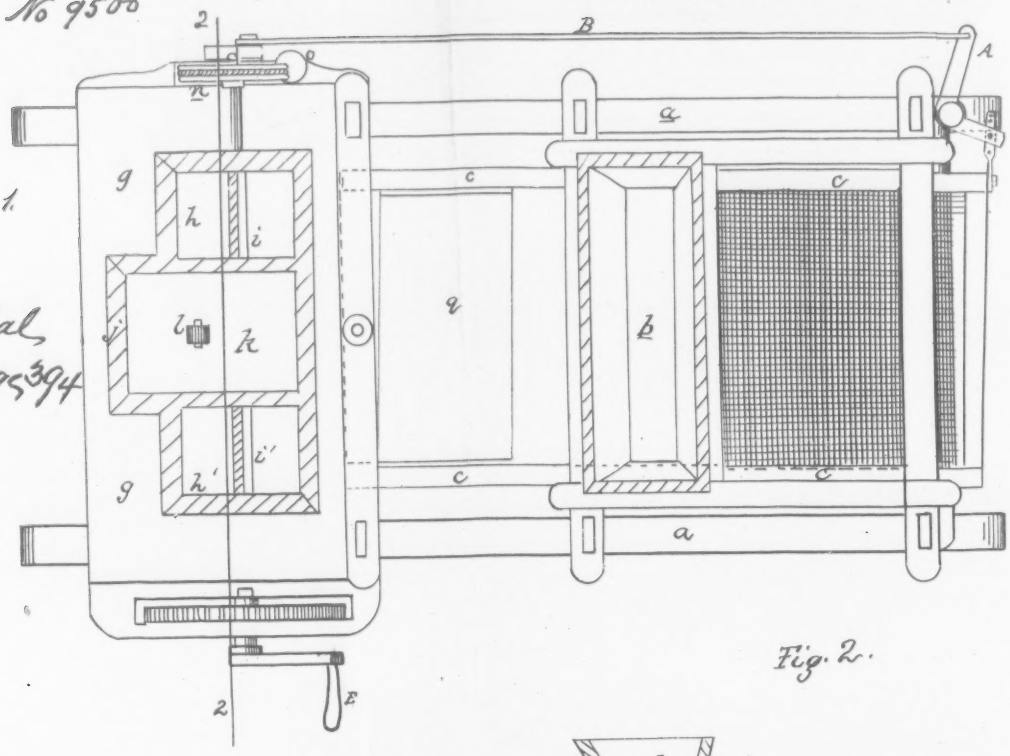
J. L. Booth
By J. Fraser & Co
Attys.

SAMUEL CANBY'S GRAIN WINNOWER

No 9500

Patented 28 Dec" 1852

Fig. 1.



No. 233 -
Parks et al
v. page 394
Booth

Fig. 2.

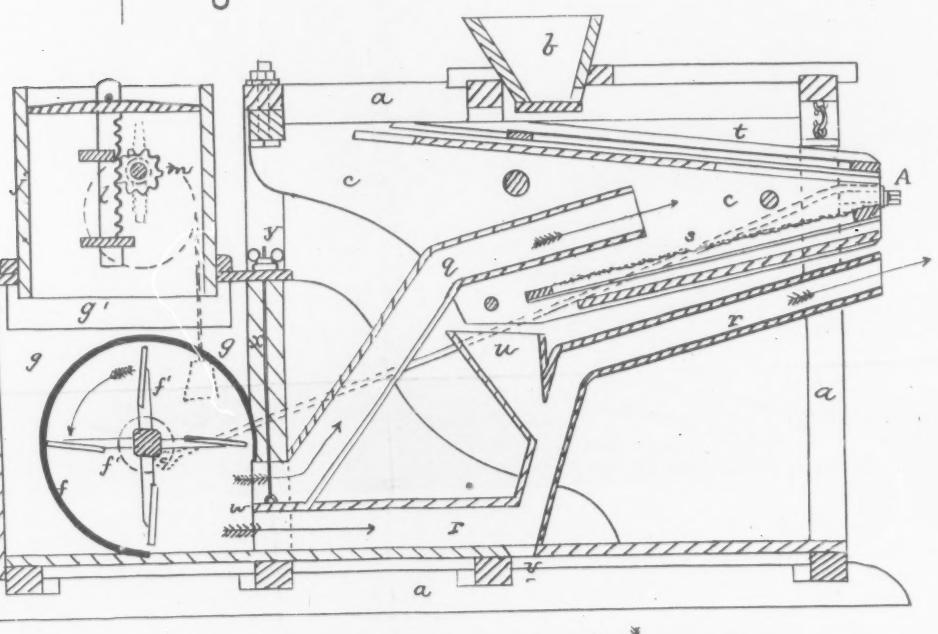


Fig. 4.

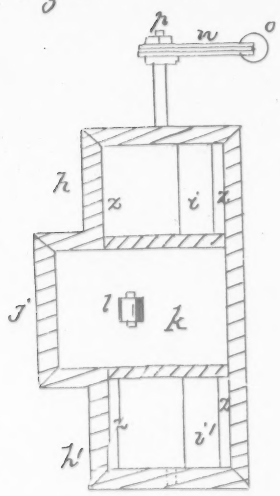
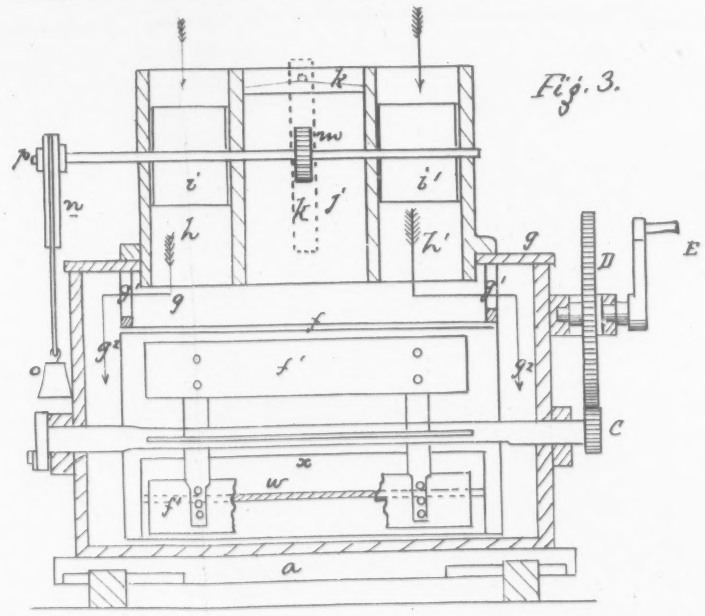


Fig. 3.



R.E. Marshall

Sheet No. 3.

No. 2,649

No. 233 -
Parkhurst et al
v.
Booth
pages 403

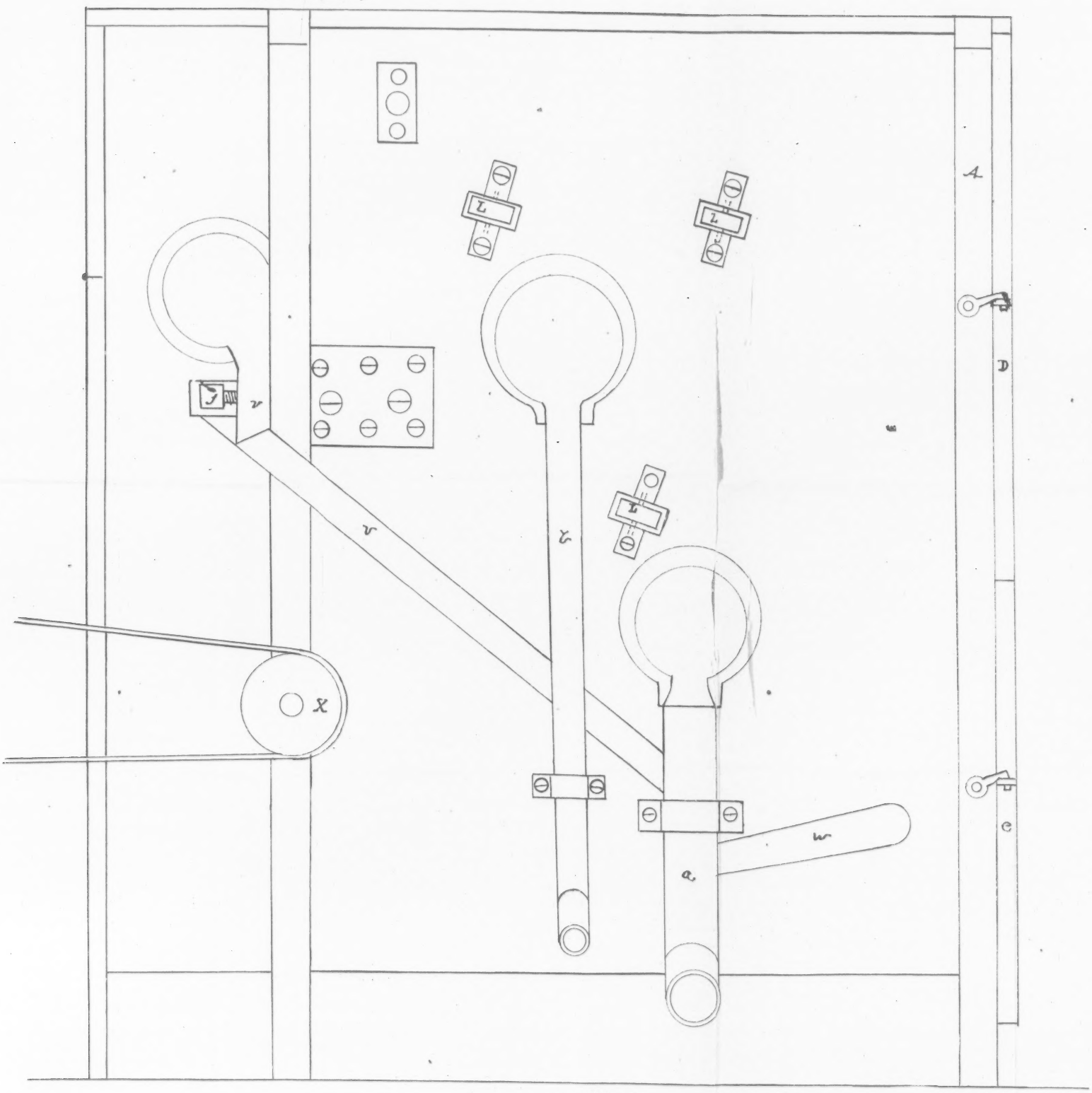


Fig. 3.

Sheet 104

No 2,644,9

No. 233 -
Parker et al
v.
Booth
Page 403

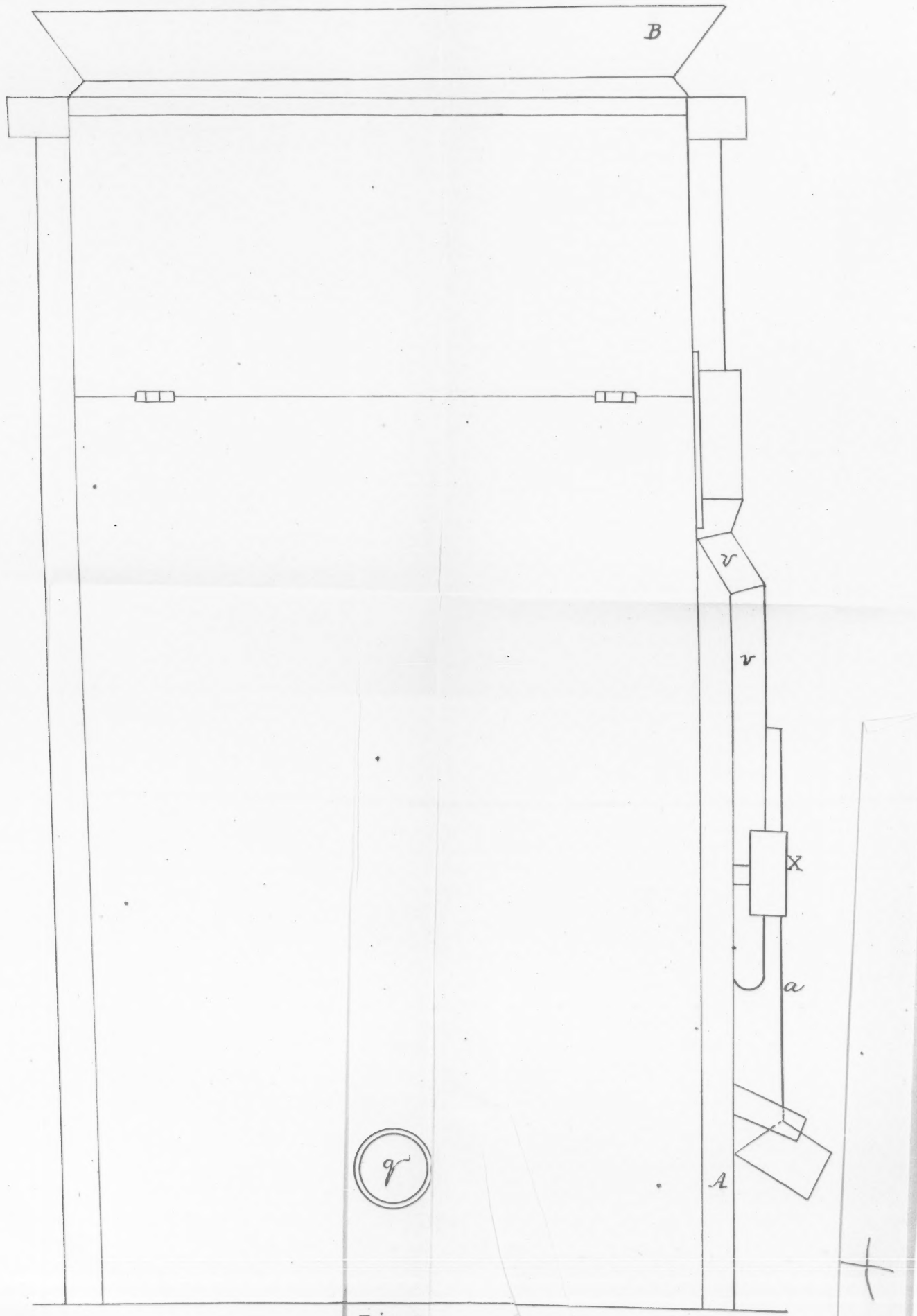


Fig. 4.

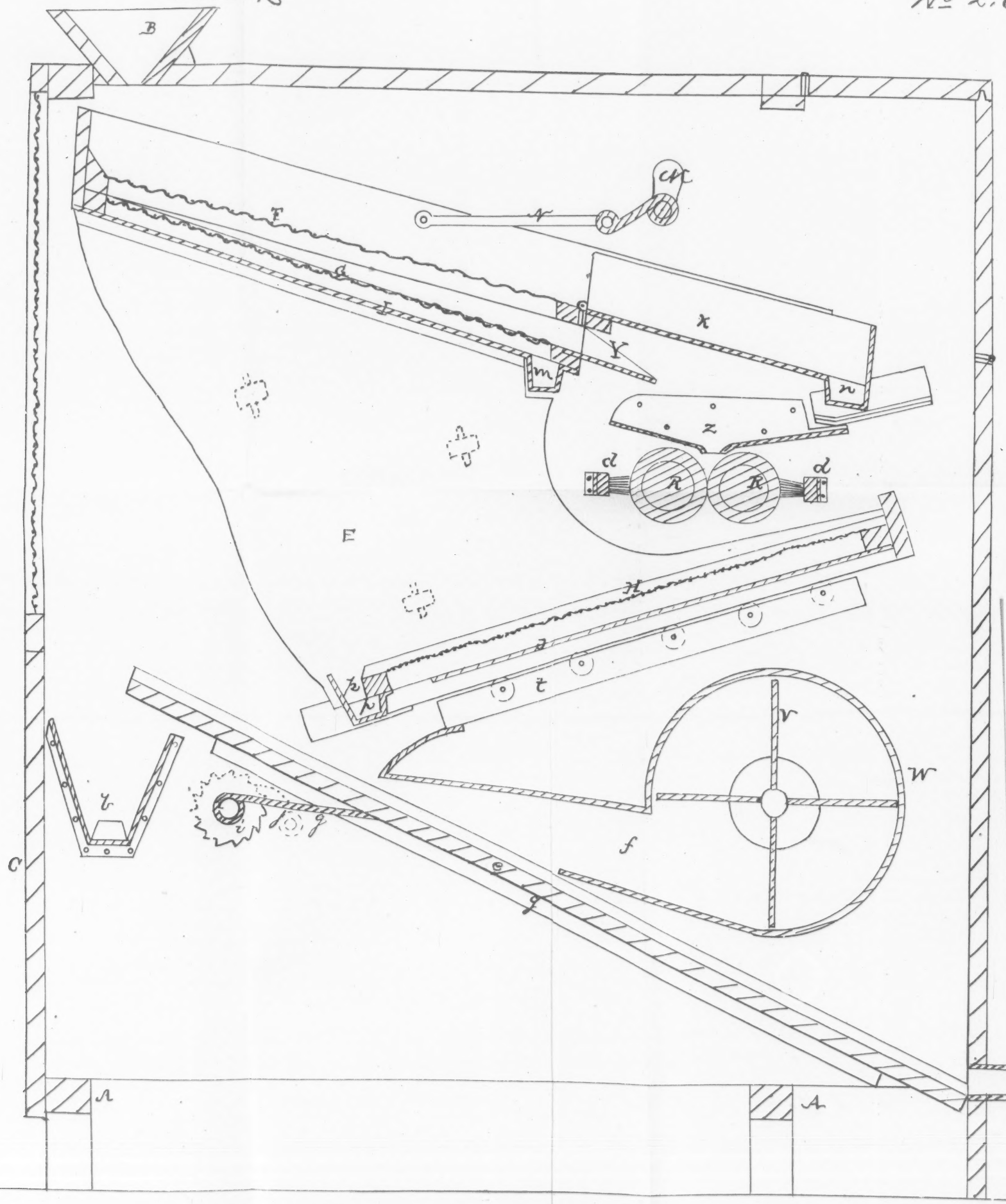
4 Sheets. Sheet no 1.

D. Flickenger and T. Krim's Machine for Cleaning Grain.

Patented 28th of May 1842

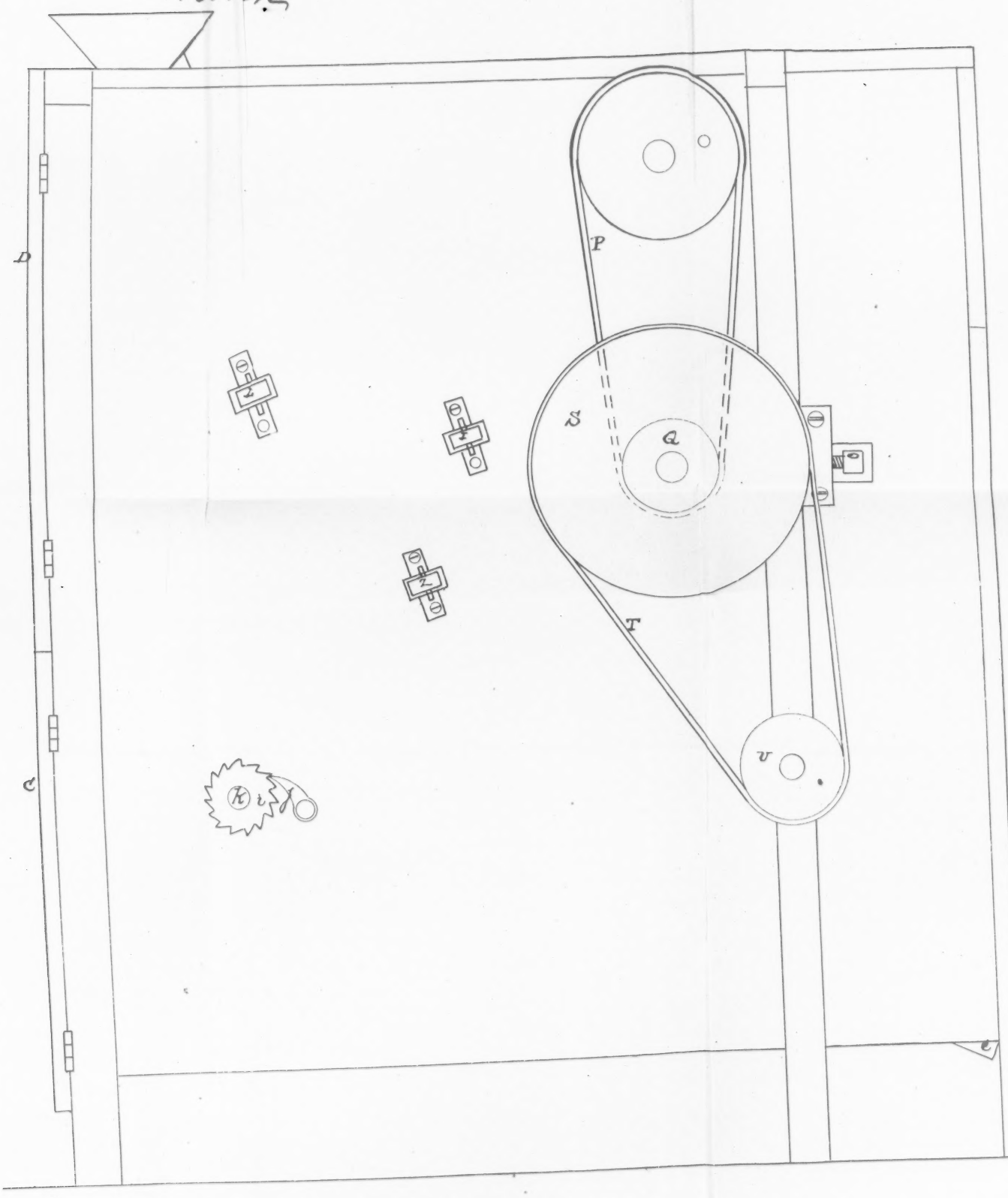
No. 233
Parks et al
v.
Book
page 403.

No 2,649



Sheet No. 2.
No. 2.6449

No. 233 -
Parkes et al,
v. Pags, 403 - Fig. 2.
Bosch



B. T Trimmer's

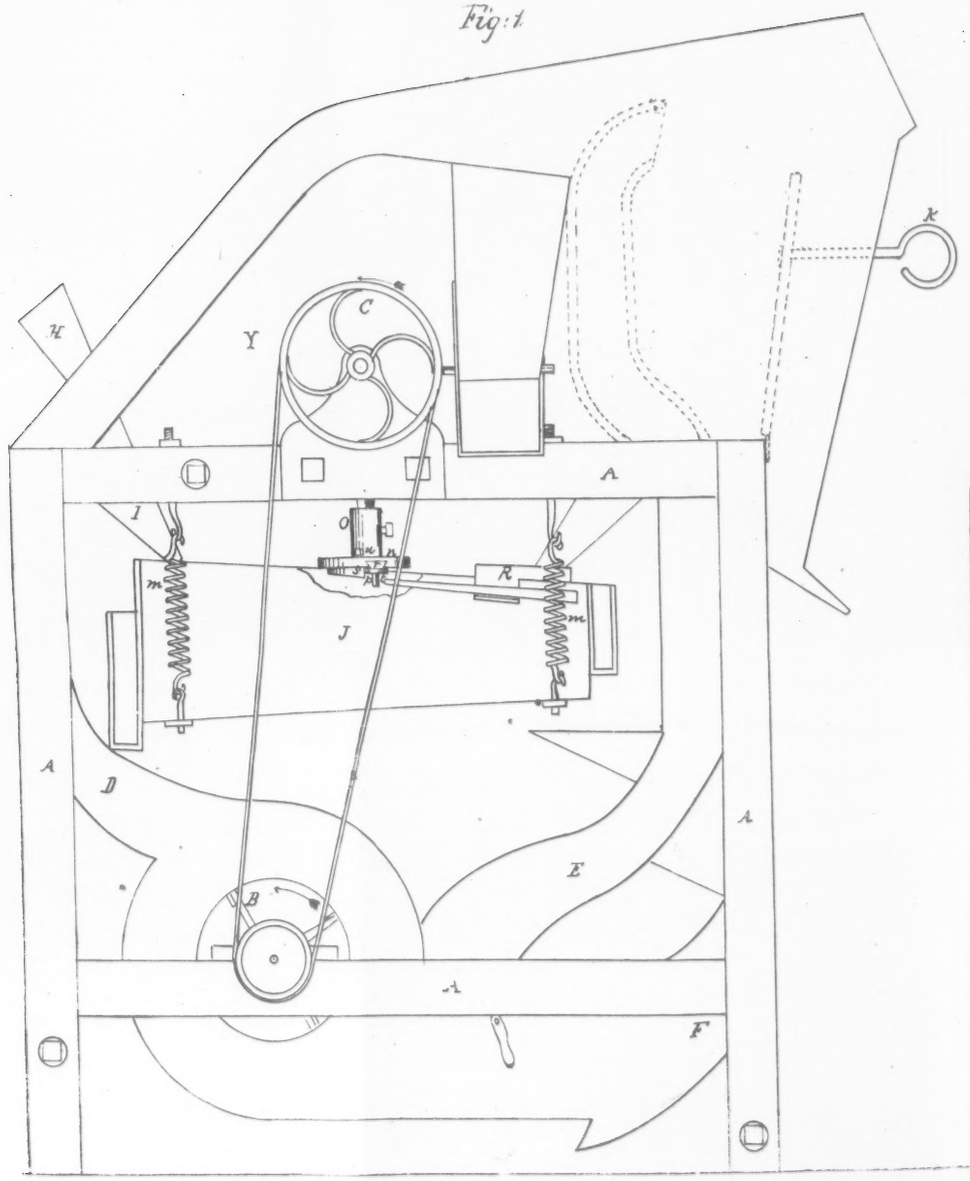
Improvement in Mach. for cleaning Grain.

No. 21,036.

Patented July 27. 1858.

No. 233 –
Parks et al
v.
Booth
pages 412

Fig: 1



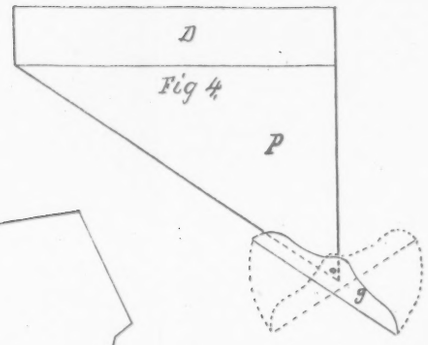


Fig 4

Fig. 5.

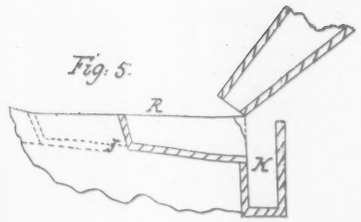


Fig. 2.

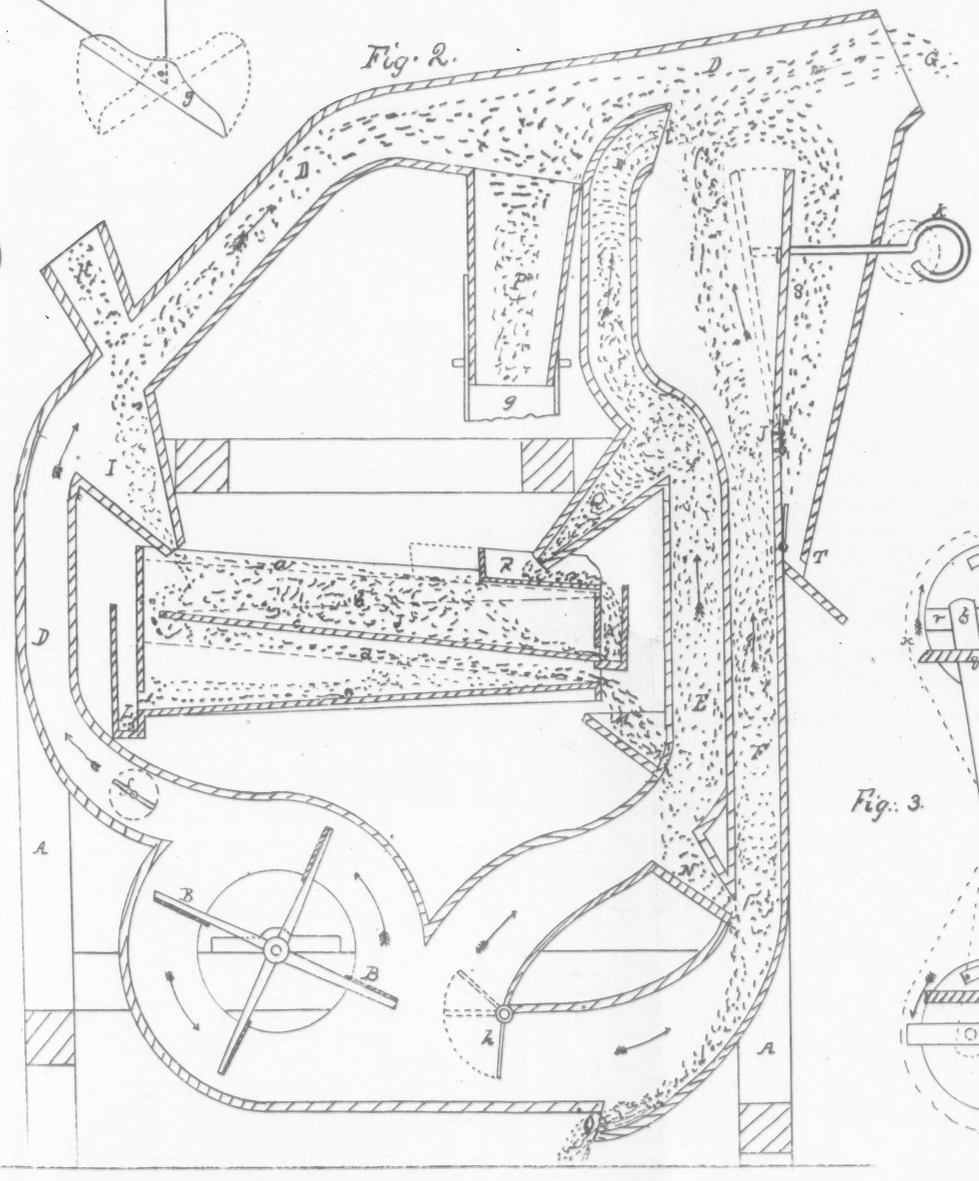
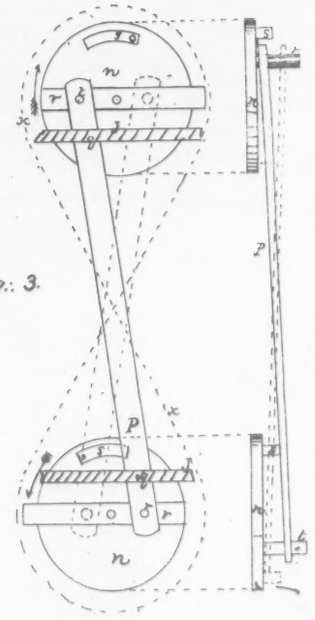


Fig. 3.



№ 12341 — No. 233 — Parks et al v. Booth — Page 421 —

Beans & Wright's Impts in Smut & Separating Machines.

Fig. 3.

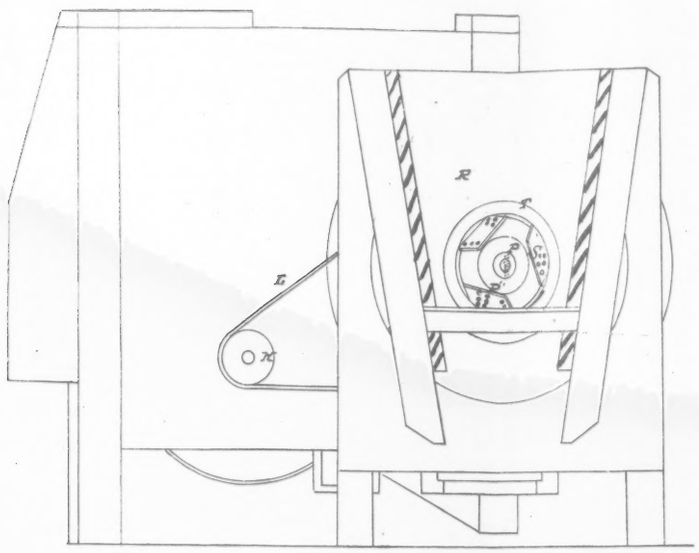


Fig 2.

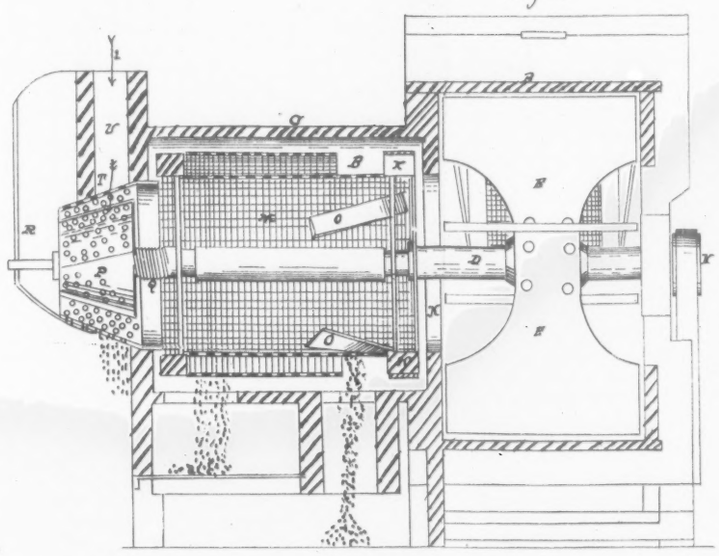


Fig. 4.

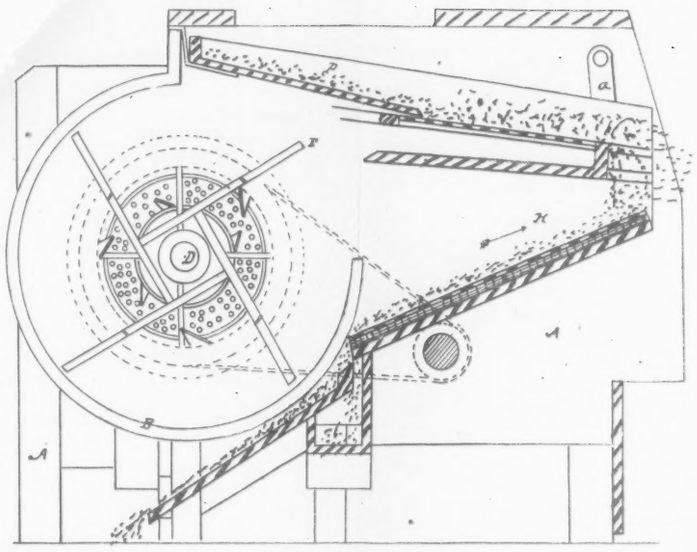
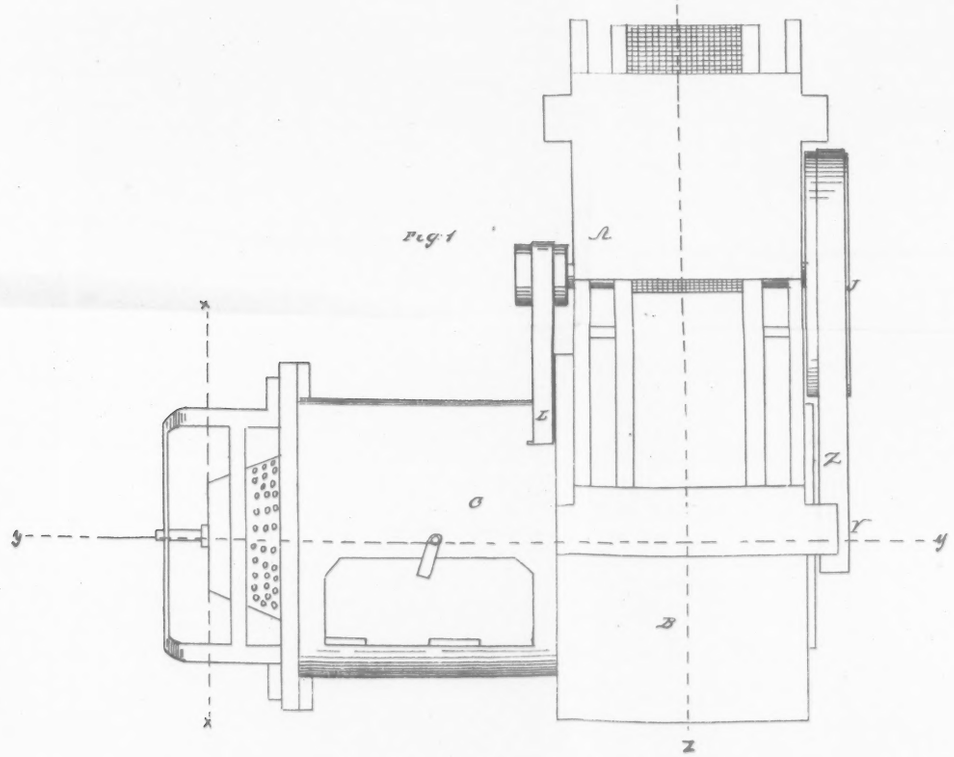


Fig. 1



Correctly attached
Nathen L. McIntire & Jr. Boff

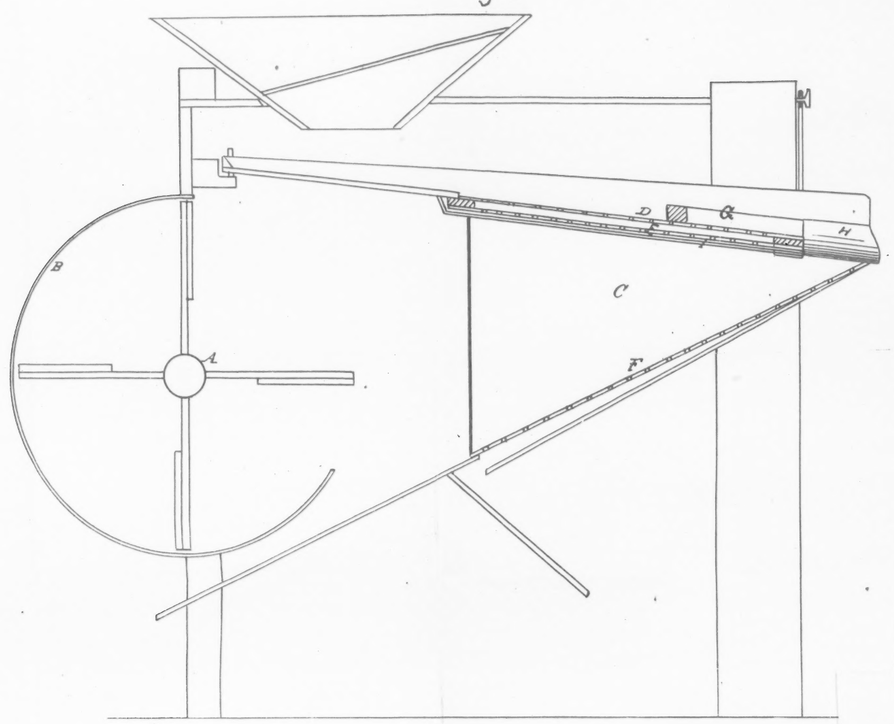
No. 933
Parkhurst
v.
Booth

John Bean's
Improv? Grain Separator

Page 425

Filed May 19. 1853.

Fig. 1



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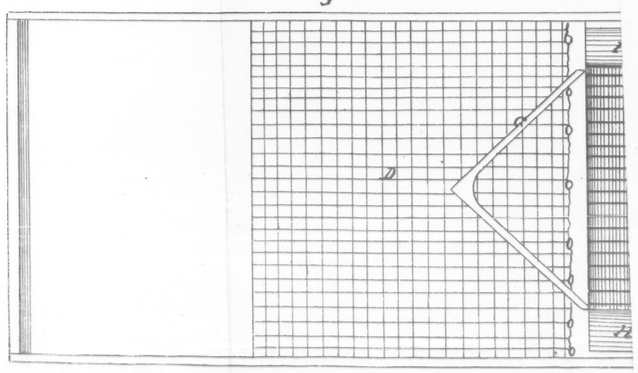
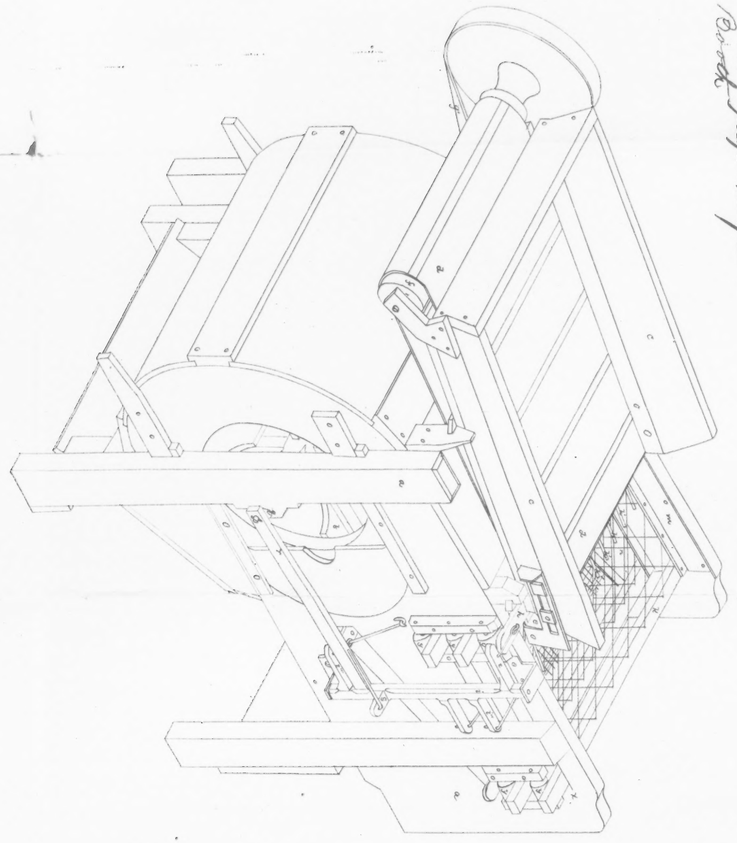


No. 933
Parkhurst
v.
Booth

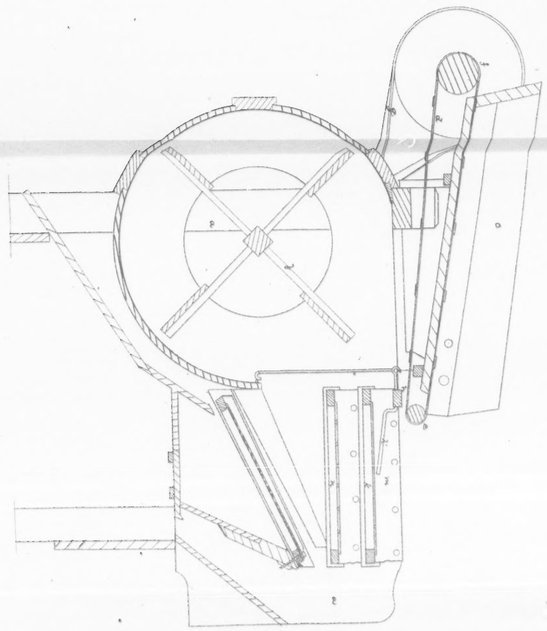
Page 425

Fig. 1.



S.M. Yeaman
Winnowing

Fig. 2.



Patented June 20. 1846.

2 Sheets Sheet No 1

J. L. Booth.

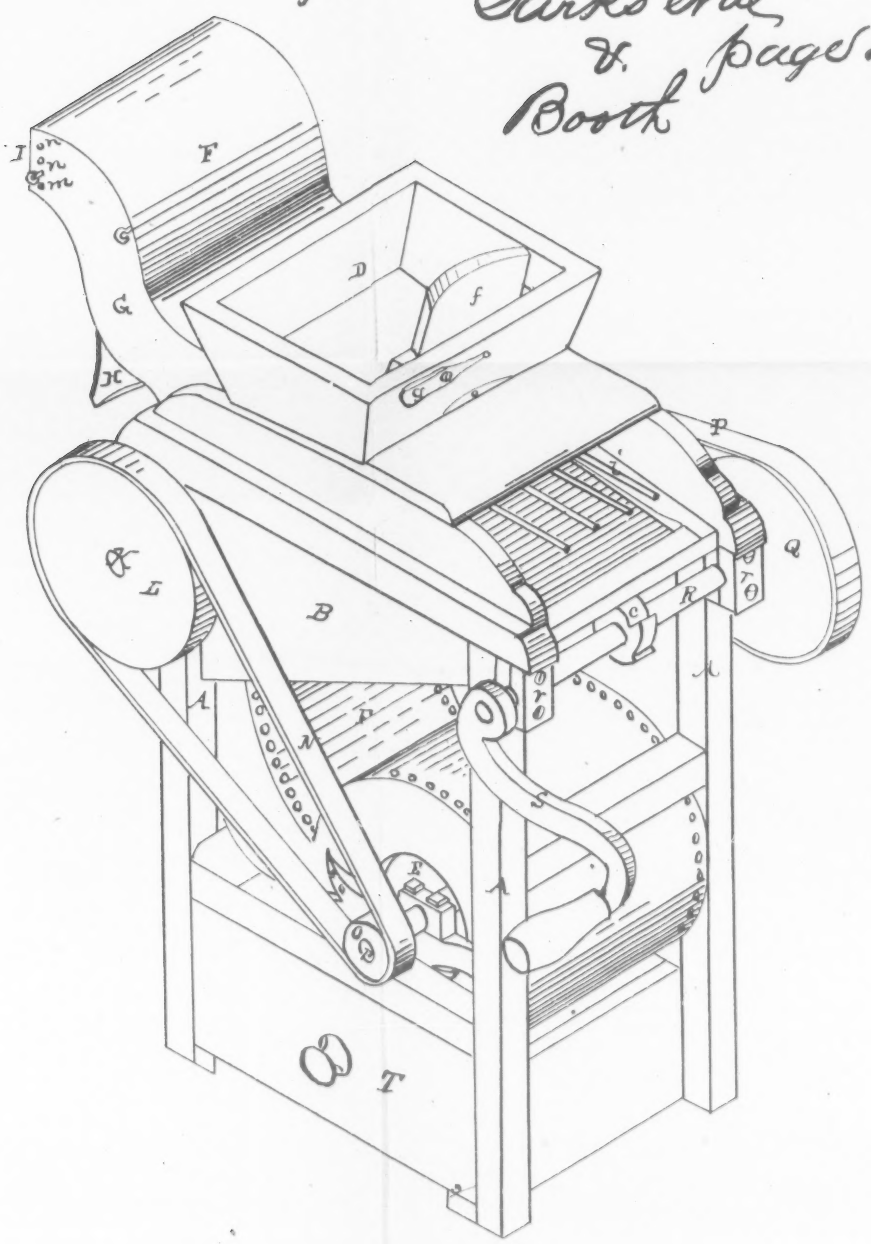
Winnowing Machine.

No. 8033.

Patented April 8 1851.

No. 233
Parks et al
v.
Booth
pages 434

Fig. 1.



2 Sheets.
Sheet No. 2.

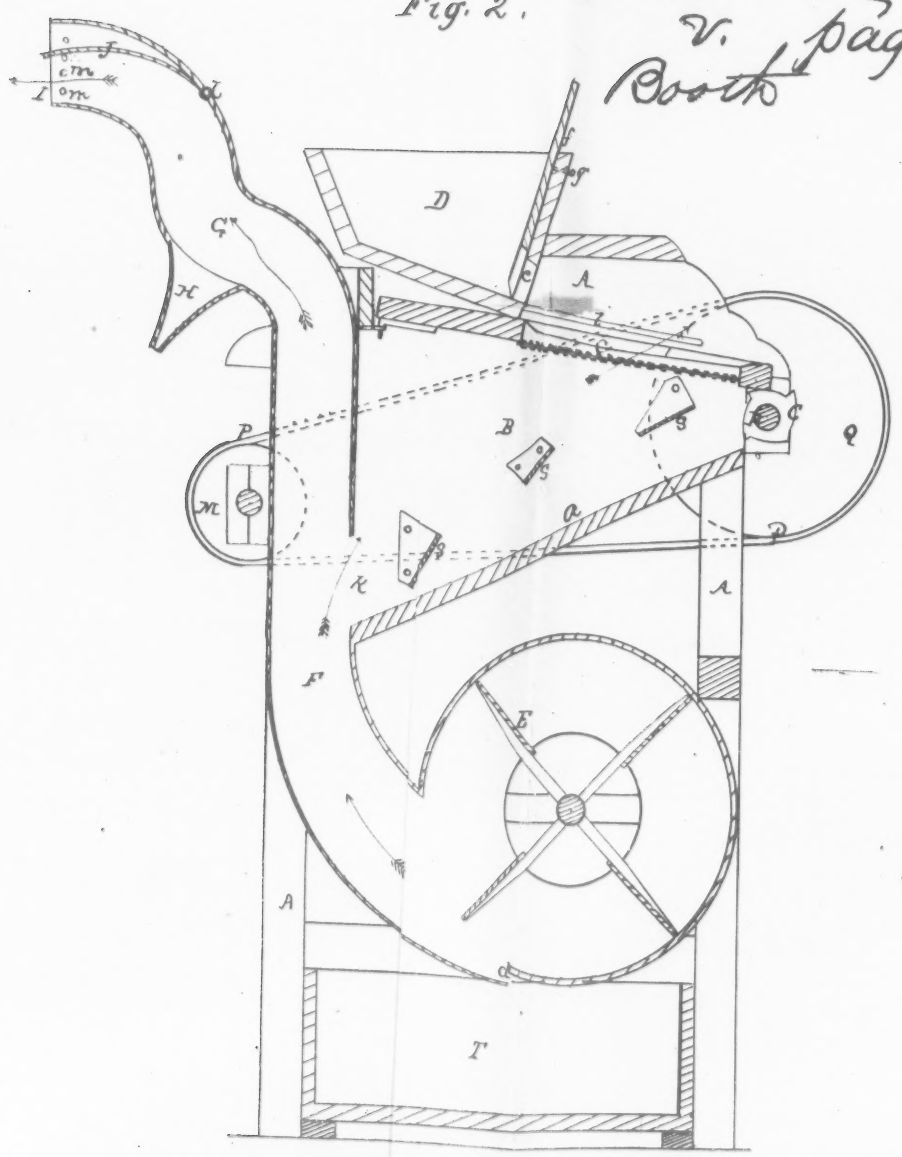
J. L. Booth.

No. 8033. Winnowing Machine.

Patented April 8. 1851.

No. 233
Parker et al
v.
Booth
page 434

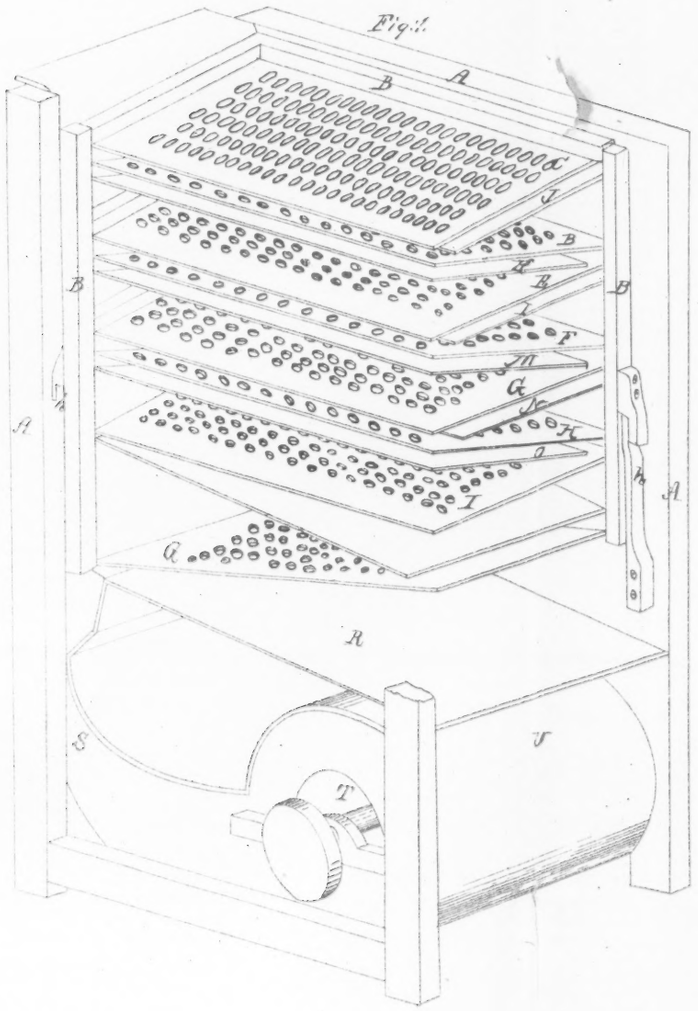
Fig. 2.



No. 233-
Parks et al
v.
Booth
Page 440-

James A. Vaughn's.
Impt in Grain Separators.
Reissued June 11. 1861.

Fig: 1.



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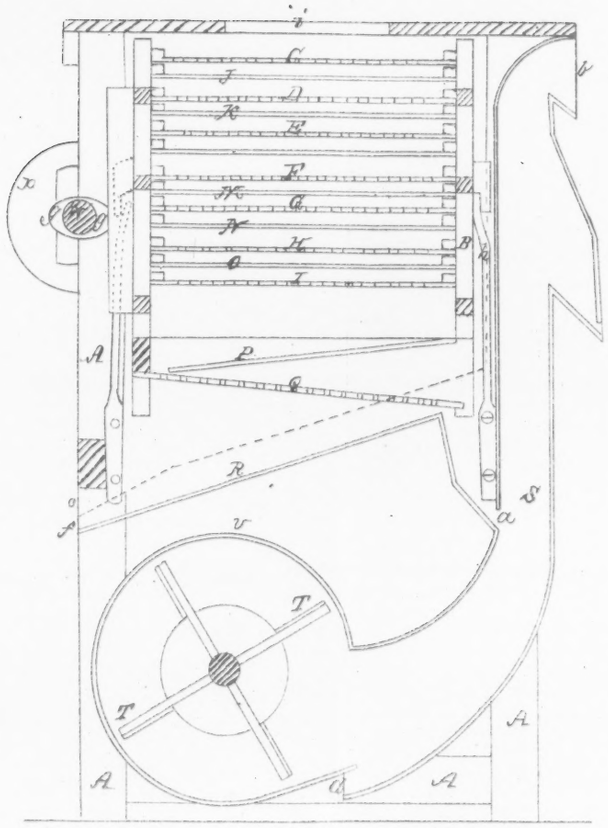
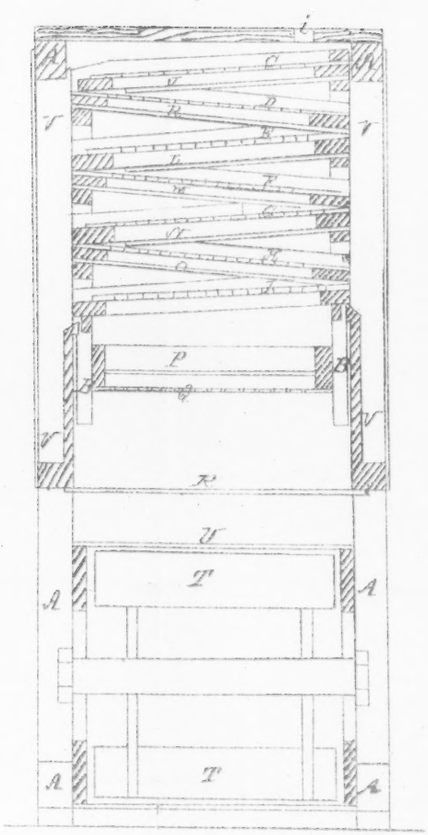


Fig: 3.



No. 28.026.

James A Vaughn's,

Improvement in Grain Separators.

No. 233 -
Parks et al
v. page 473.
Booth

Patented April 24th 1860.

Fig. 2.

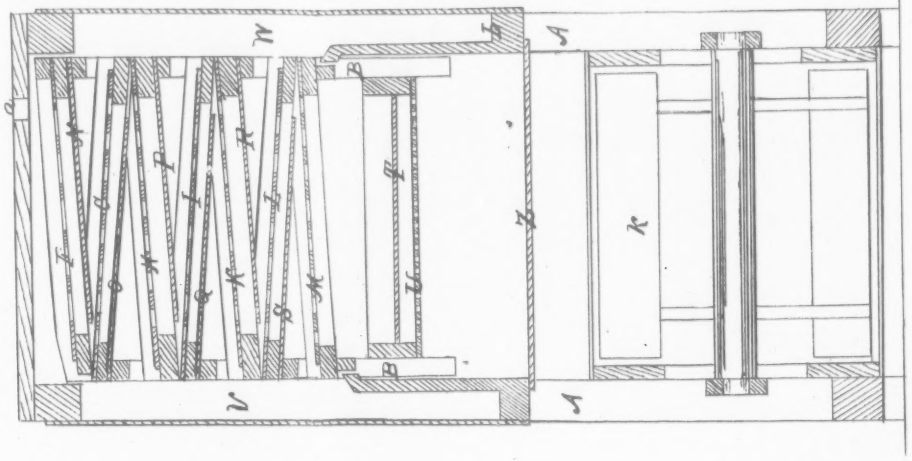
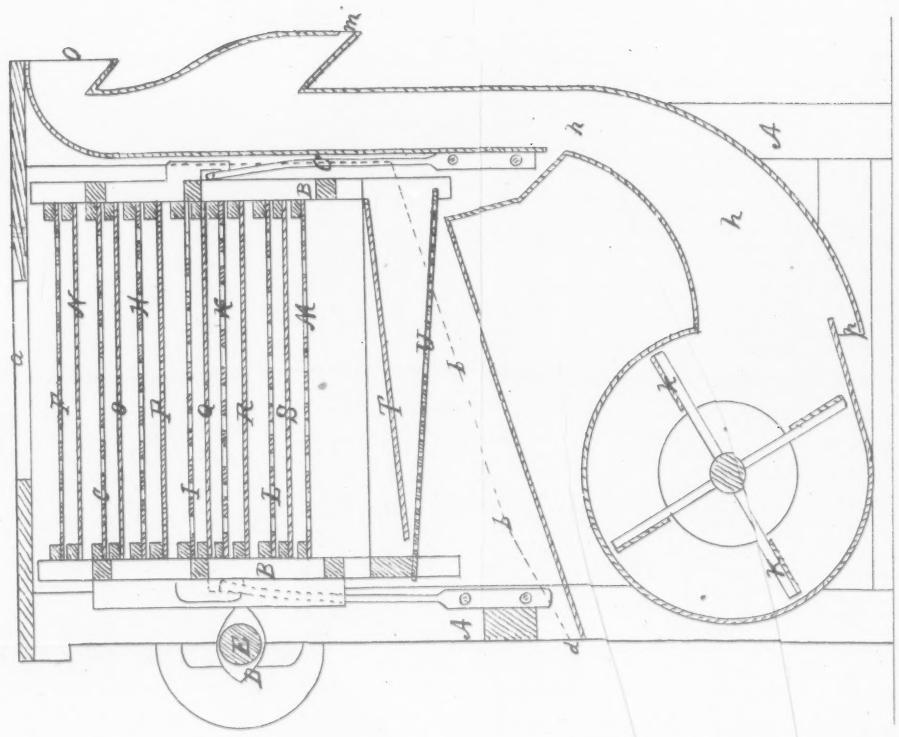


Fig. 1.



Witnesses

E. Cohen

F. Kirsch

Inventor.

James A. Vaughn
by his attorney
A. B. Stoughton

P. Elliott

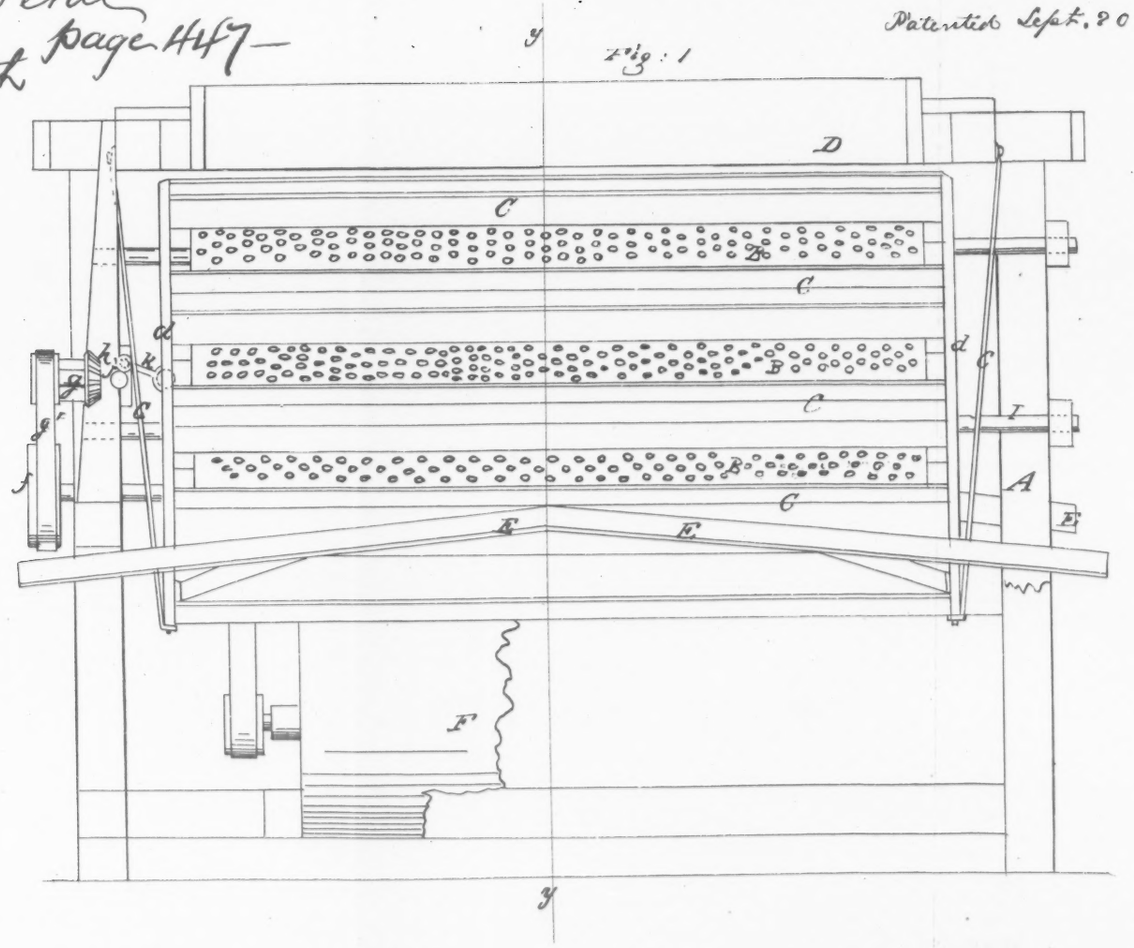
No. 25.484.

No. 233
Parks et al
v.
Booth page 447

J. L. Booth's Grain Separator

Patented Sept. 20 1859.

Fig: 1



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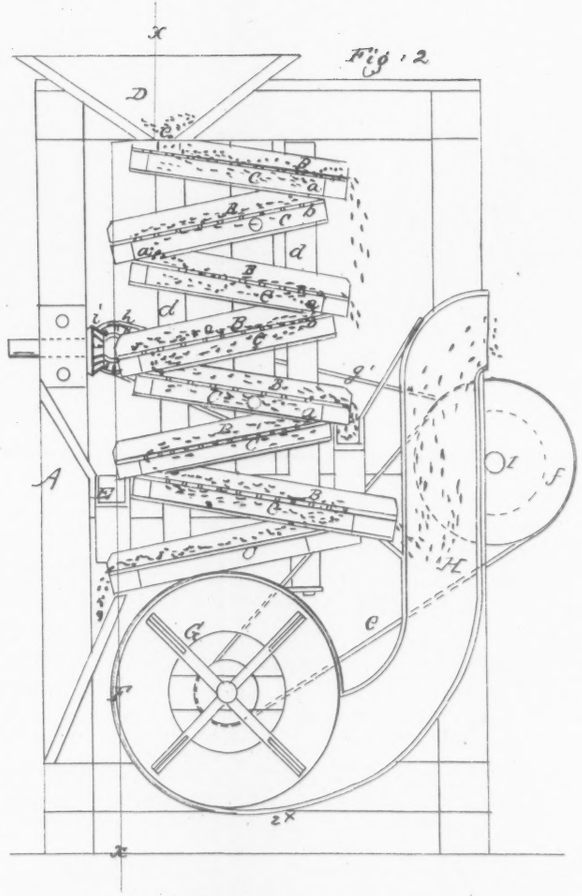

James A Vaughn's
Improvement in Grain Separators.

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Reissued June 11, 1861

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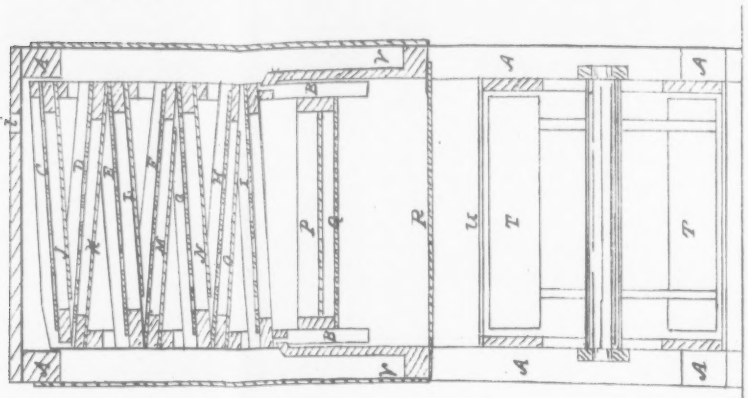
Boodt Page 482

Fig. 2.



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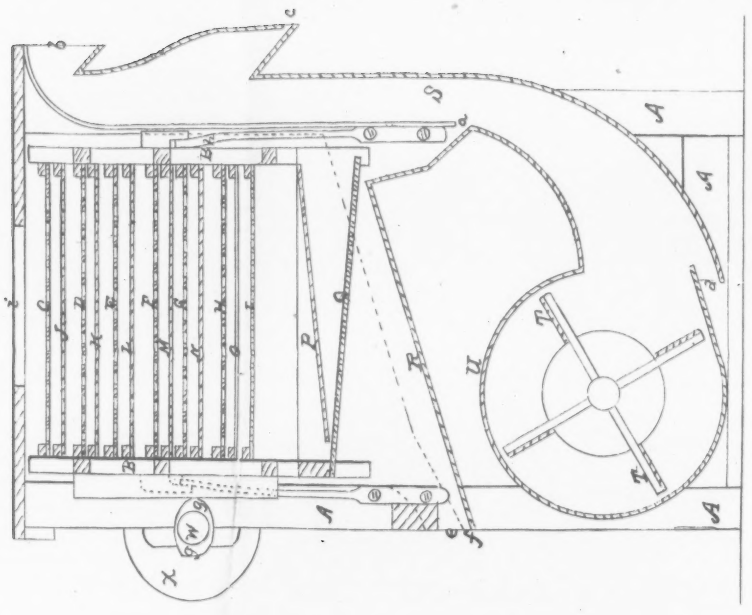
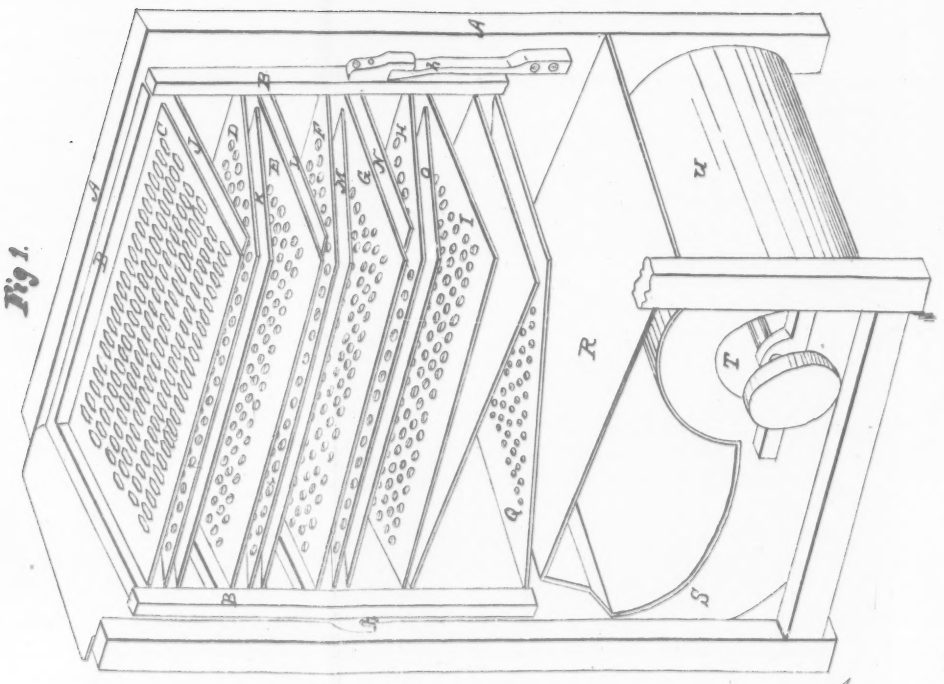


Fig 1.



Witnesses.
E Cohen
Julius Hirsh

Inventor.
James A. Vaughn
By atty A. B. Stoughton

Bishop

James A Vaughn's
Improvement in Grain Separators

No 15

No. 233-
Particular
Book
V. page 501

Reissued Jan. 8. 1861

Fig 1

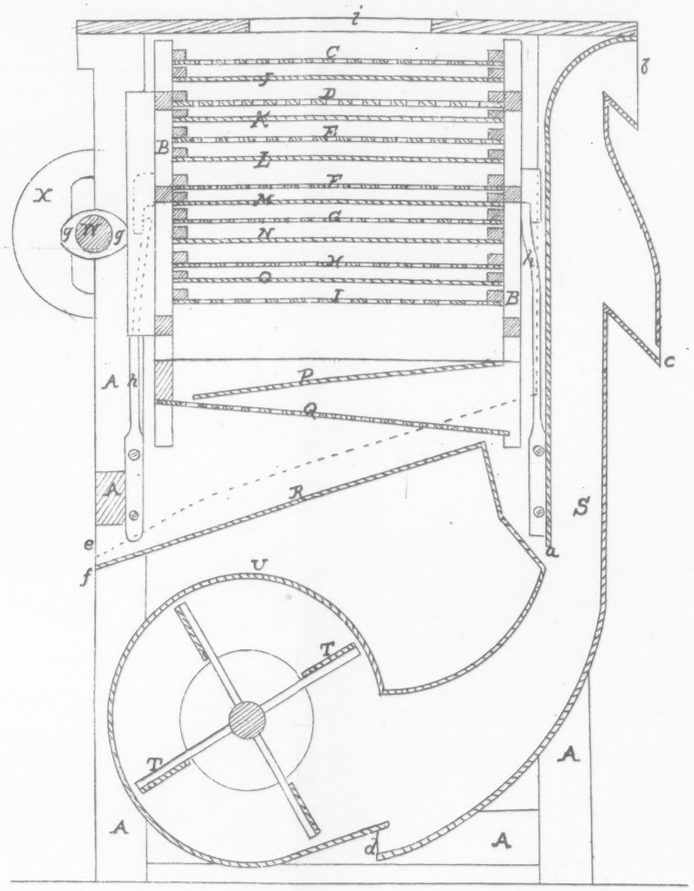
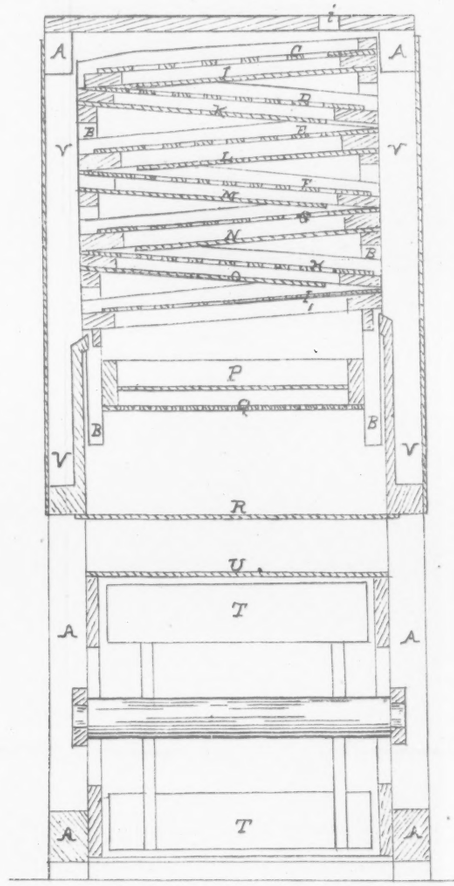


Fig 2



Witnesses
E Cohen
J Hirsh

Inventor
James A Vaughn
By Atty A B Stoughton

Warren

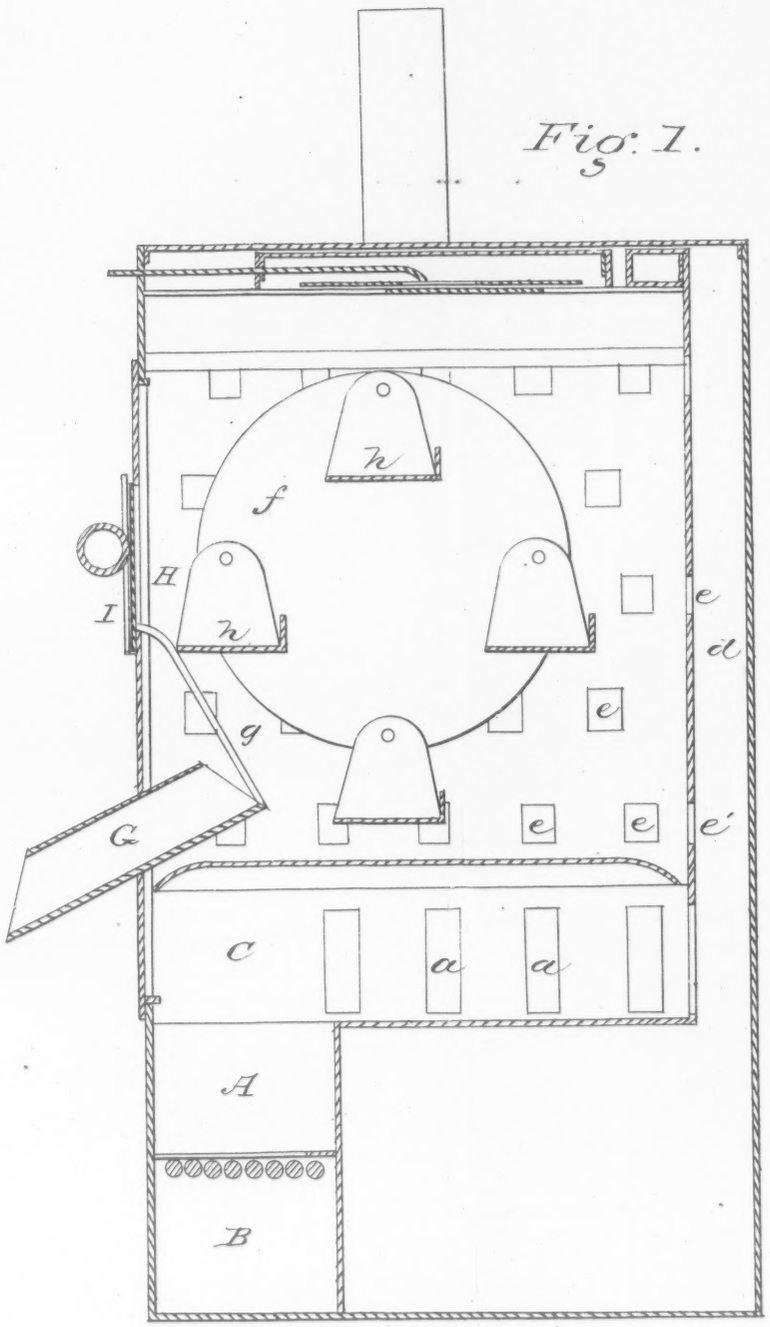
No. 228
Ball et al page 90
&
Baumgarden & Langles

H. Balls Impt in Bake Ovens

Patented Sep 28th 1856

No 15.753

Fig: 1.



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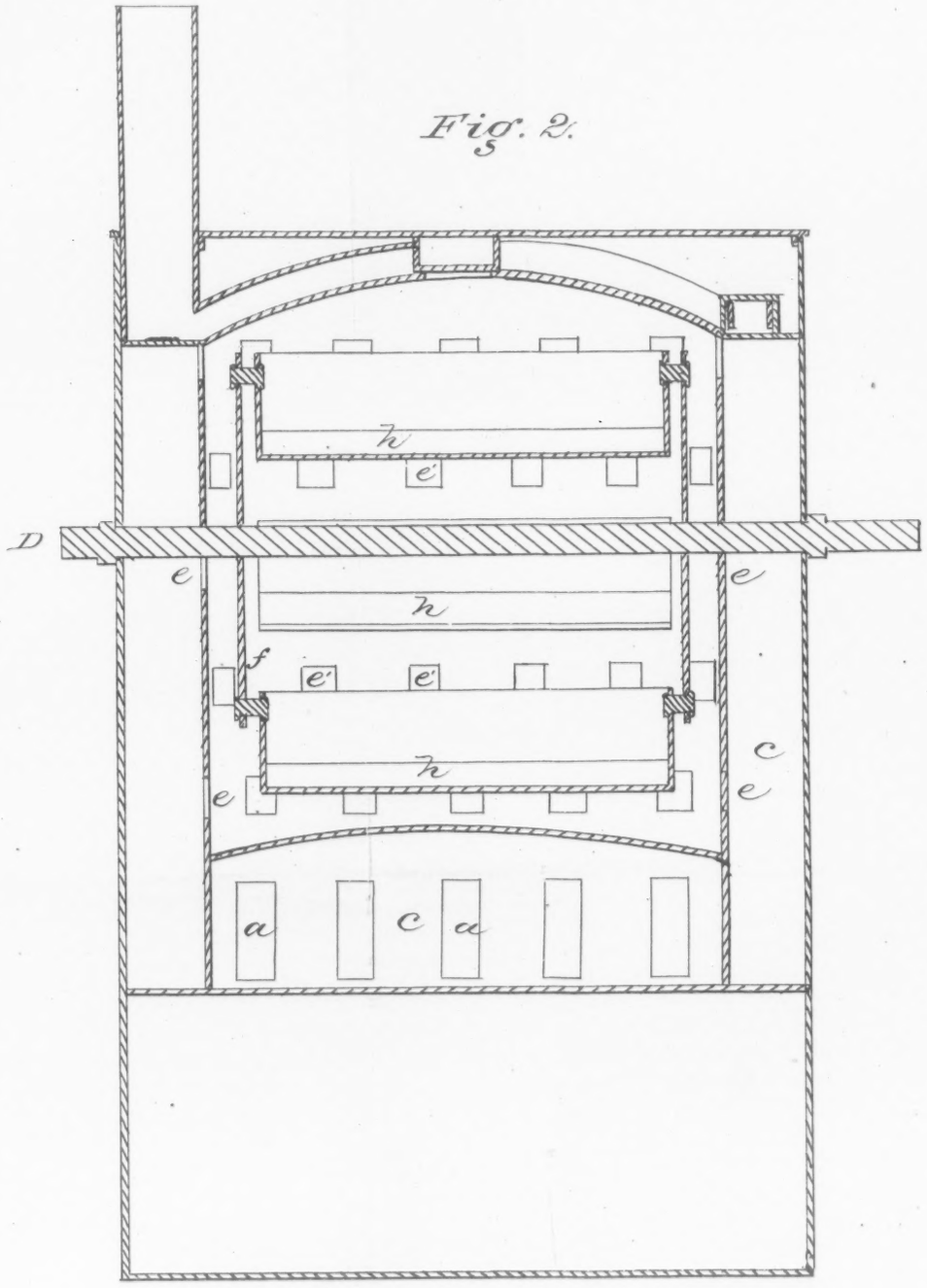

Duncan McKenzie Impt in Ovens.

115626

Patented Jun 6. 1871.

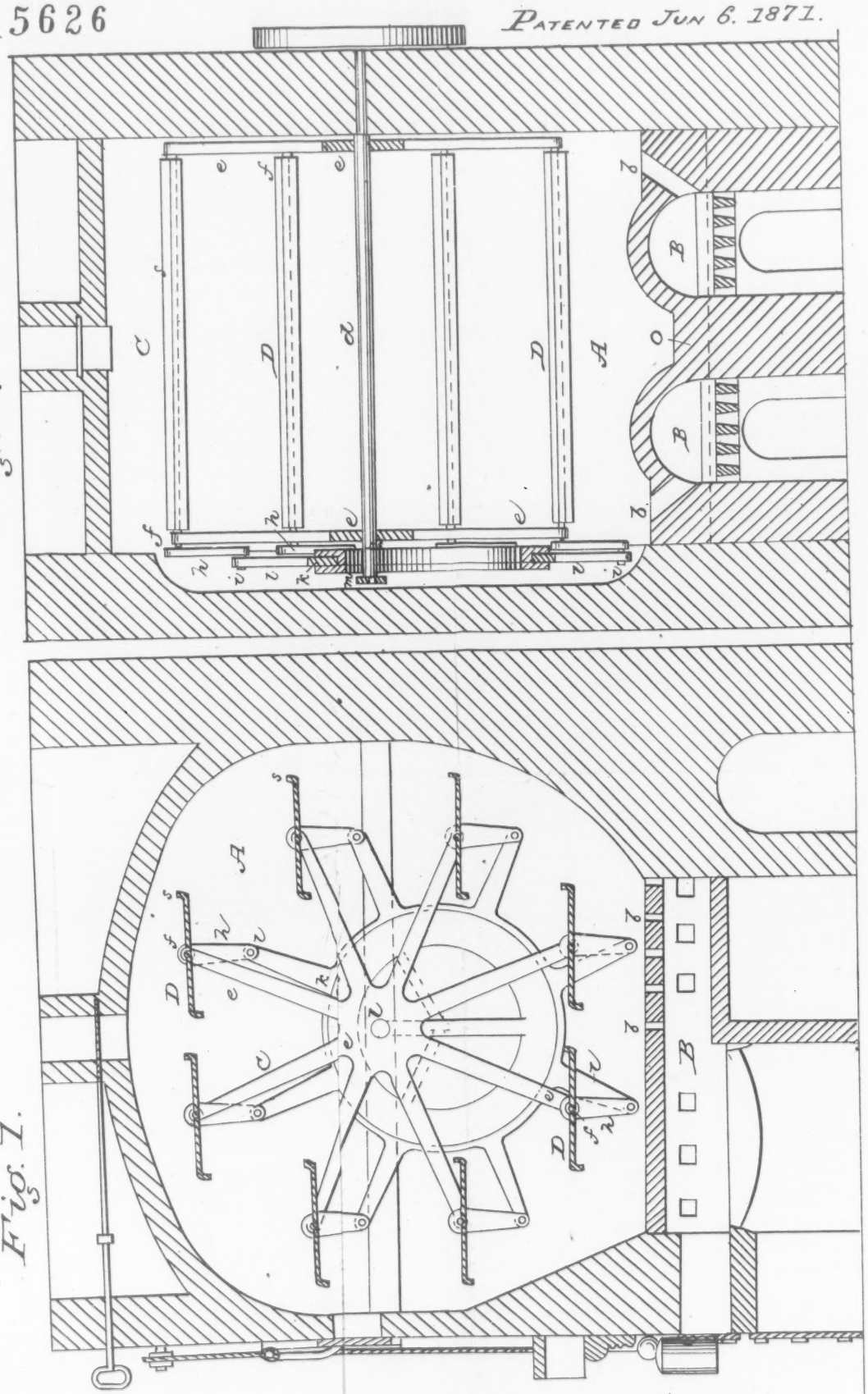

Fig. 2.

Fig. 1.

Witnesses:

Fred Haynes

R. Redway

Inventor

Duncan McKenzie

78

No. 228-

Ball et al

v

Baumgarden et Langles

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James Hall

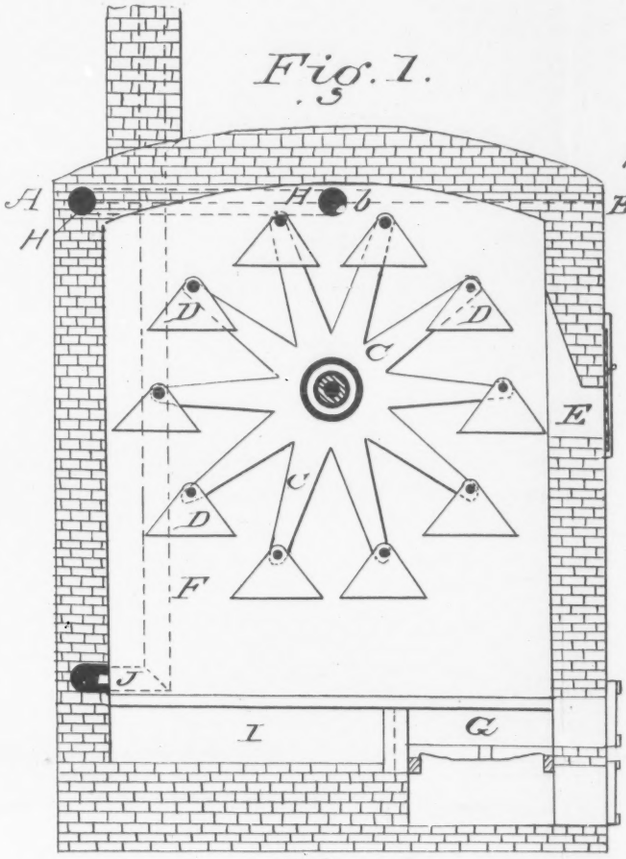
108258

Imp't in Revolving Reel

PATENTED OCT 11. 1870

Bake Oven

Fig. 1.



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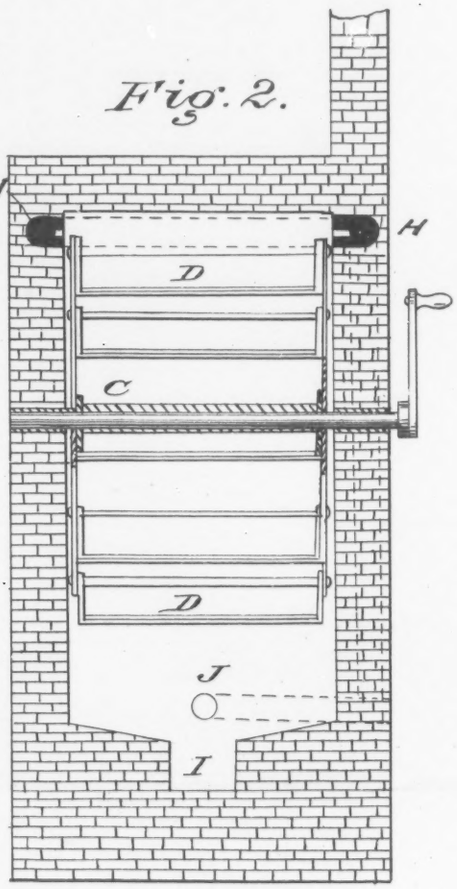

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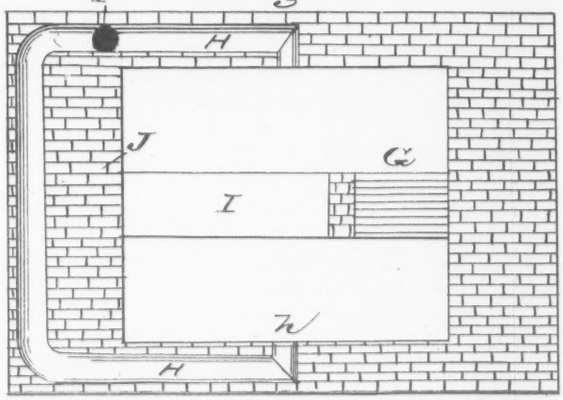

Inventor.

James Hall
By H. Millward
Attorney

Attest:

E. F. Layman
Harry Millward

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Ball et al
&
Baumgarden & Langles

page 83.

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№ 15.753 № 3666

H BALL'S

IMPT IN BAKE OVENS

Patented Sep. 23. 1856.

Reissued OCT. 12. 1869

Fig. 1.

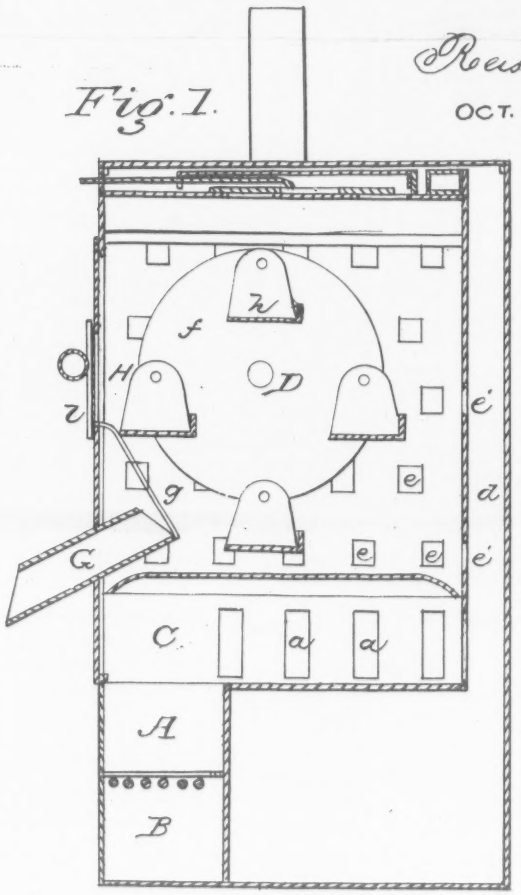
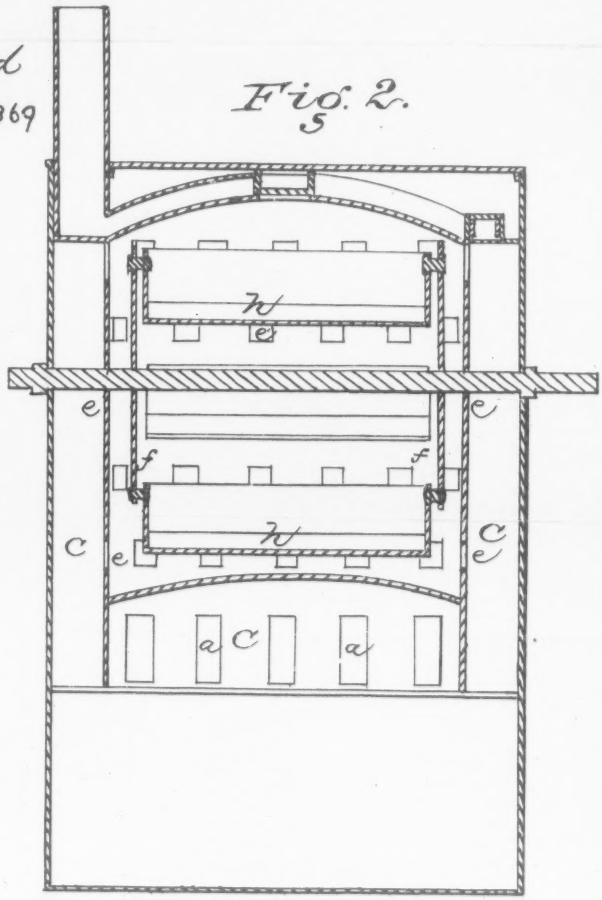


Fig. 2.



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Ball et al
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Baumgarden et Langles
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Ball vs. page 65.
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Baumgarden & Langles

4026

H BALL'S
IMPT IN BAKE OVENS

Fig. 1

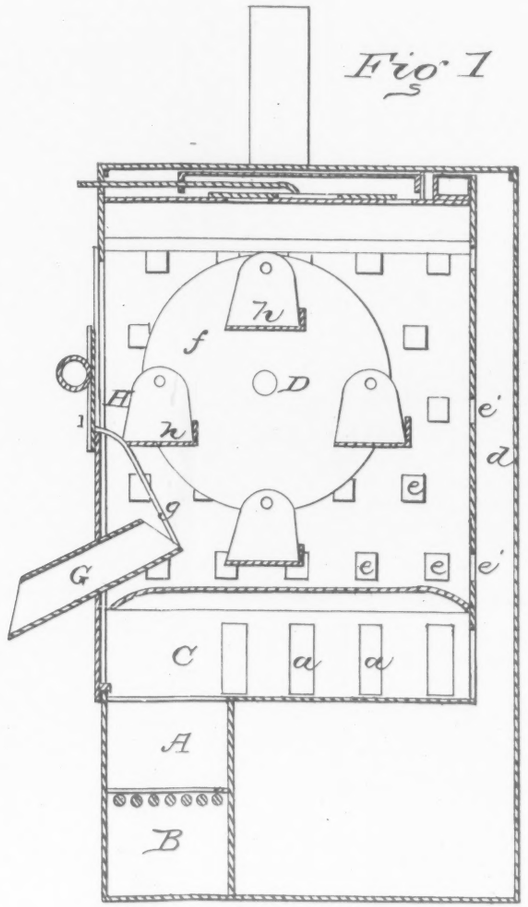
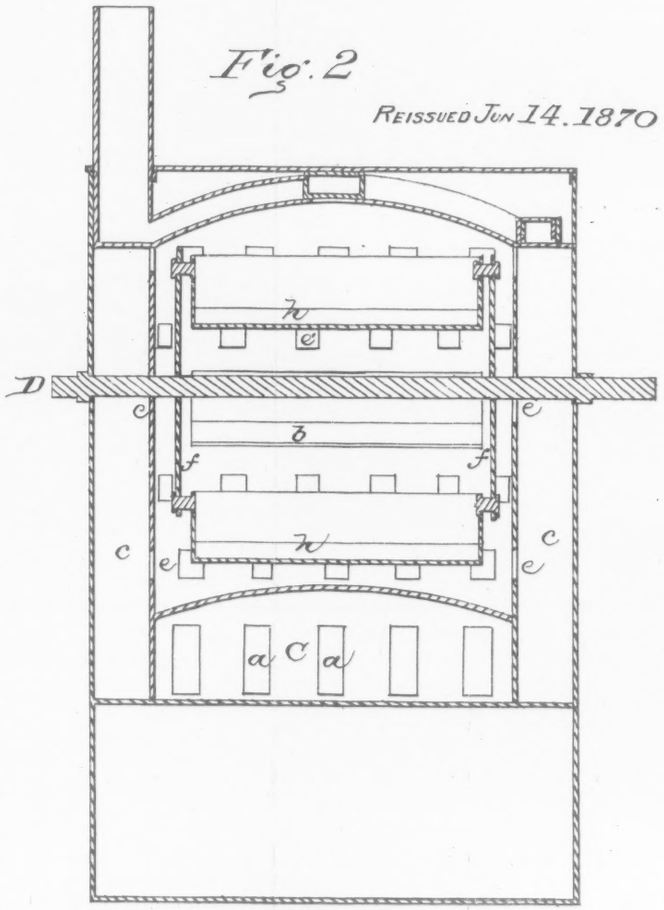
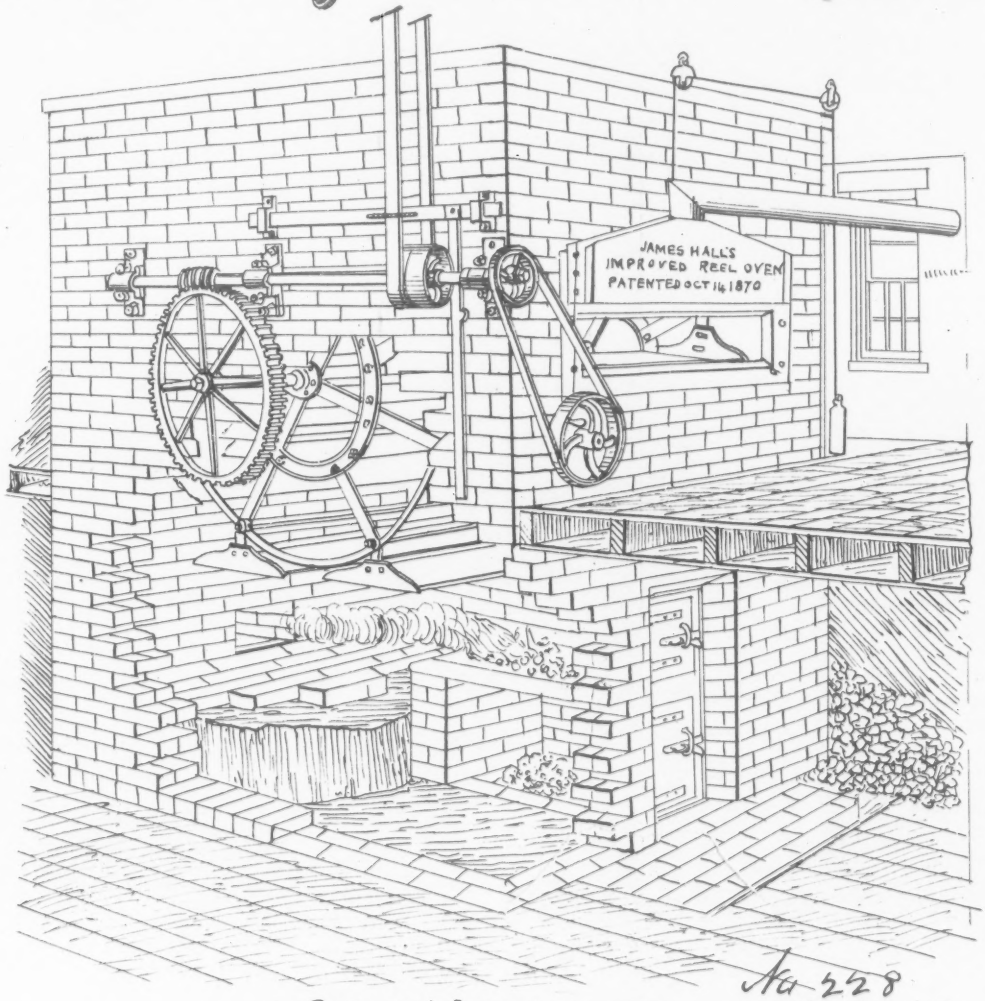


Fig. 2

Reissued Jun 14. 1870



HALL'S
Revolving Reel Bake Oven



Patented October 11, 1870

No 228
Ball ral page 383
v.
Baumgarden
Langles

JAMES HALL,

No. 139 East Pearl Street, Cincinnati.

Fig. 1

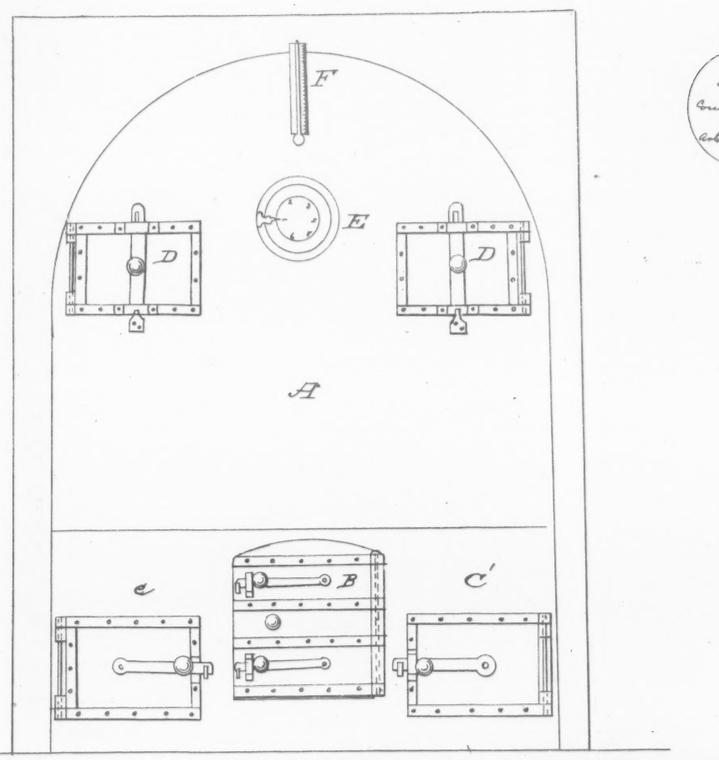
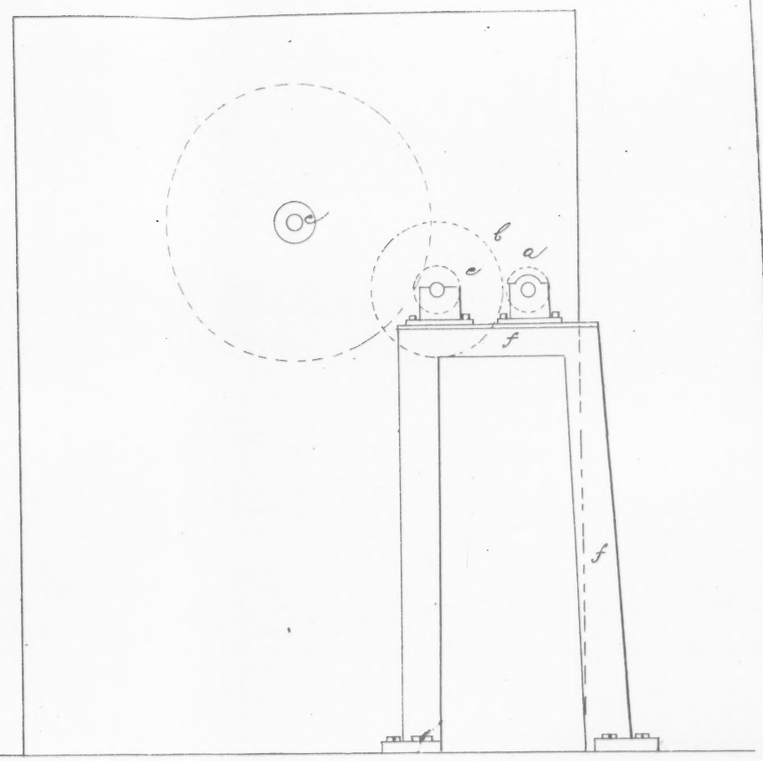


Fig. 2.



468

Vu pour être annexé au brevet de quinze ans pris
le 13 Juin 1846 par le sieur Ball et. Paris le 11 août 1846
Par le Ministre et par délégation
Le Maître des Requêtes Directeur

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No 228
Ball + al
v page 393
Baumgarden
+ Langlois

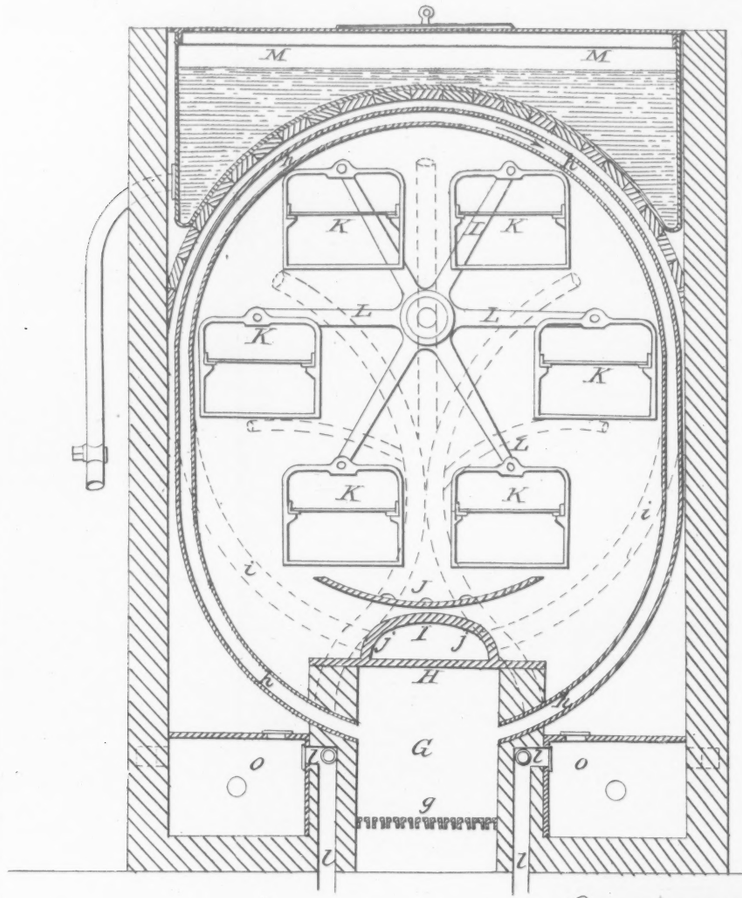
Examined to be annexed to the 15 years
Patent taken on the 13th of June, by Mr Ball et al
Paris Aug 11th 1846
For the Minister and by delegation
The Master of applications and Director
(Signed) A. Lenoir

Pour Copie conforme
le Général de Division
Directeur
Du Conservatoire des arts et Metiers
(Signed) Morin
Paris, le 20 November 1872

Brevet.

(m. S. 82)

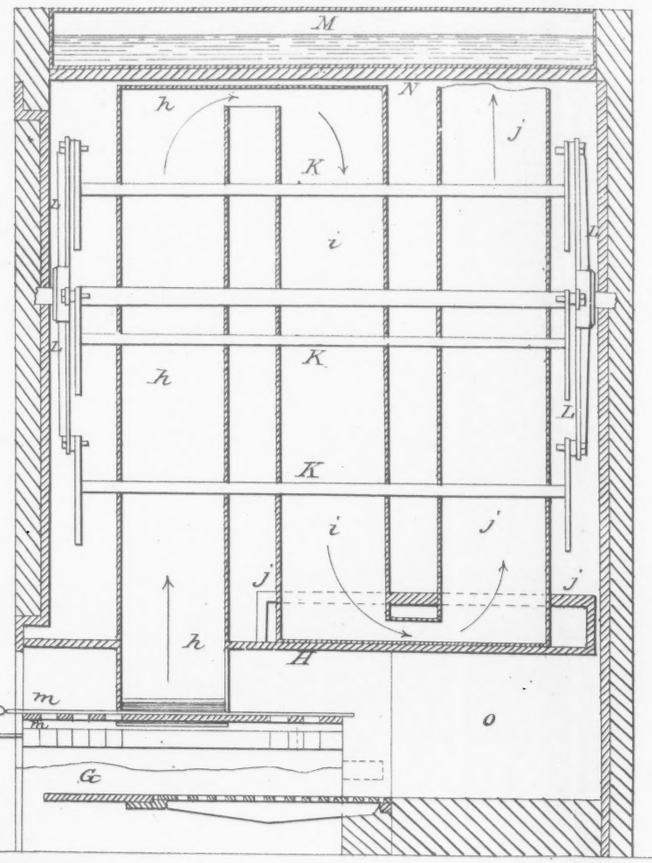
Fig. 3.



Echelle au 1/10 — 1 Metre

Seal Conservatoire des arts & Metiers

Fig. 4.



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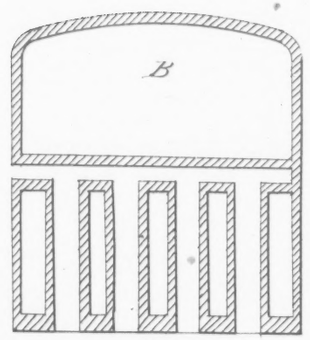

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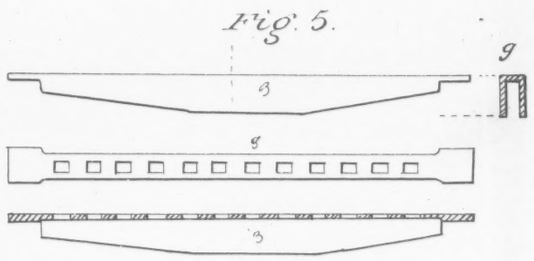

Vu pour être annexé au brevet de quinze ans du 3 Juin 1846 pris par le Sieur Coulet
Paris le 11 août 1846
Pour le Ministre et par délégation
Le Maître des requêtes Directeur
Signé: A. Senac

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v.
Baumgarden
Langlois

Pour copie conforme
le General de Division
Du Conservatoire des arts et Metiers
Signé: A. Morin
Paris 20 Novembre 1872

Seal

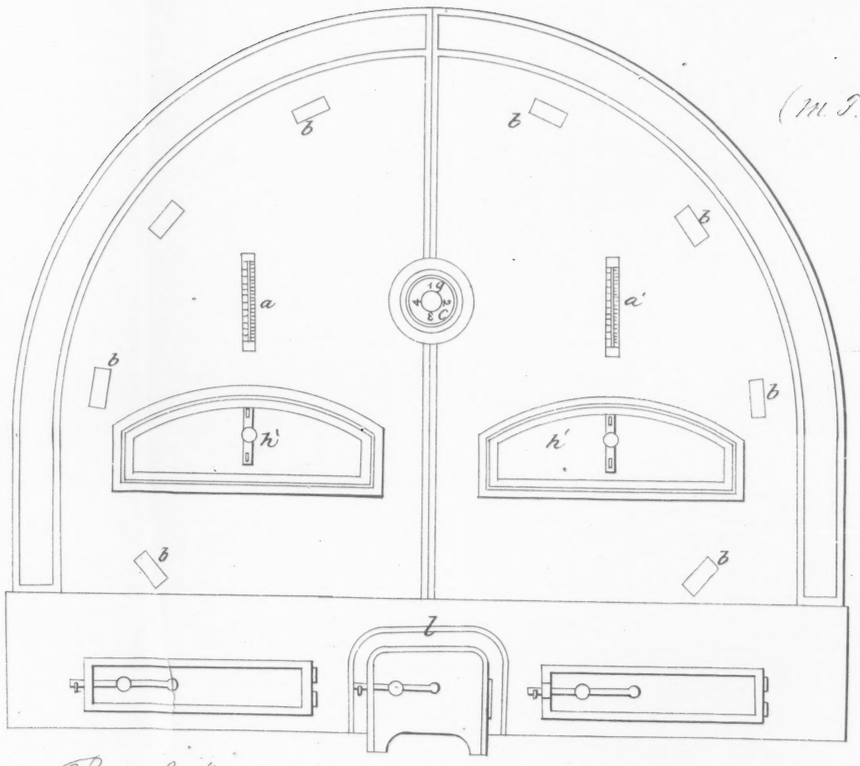
Vu pour être annexé au brevet de quinze ans pris par le Sieur Coulet le 13 Juin 1846
Paris le 11 août 1846
Signé: Coulet

1re Addition.

Four Covlet

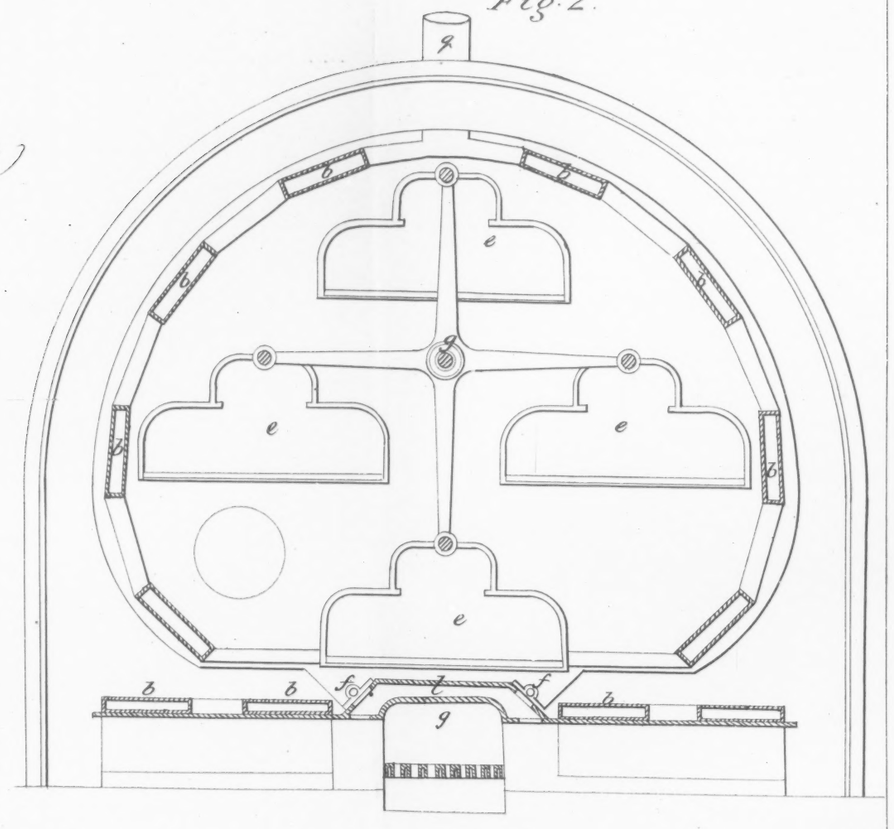
Pl. 1re

Fig. 1



Vue de face

Fig. 2



Coupe transversale Echelle 1/10

(M. T. S. 2)

Paris le 7 juin 1847
Signé Covlet

390 Vu pour être annexé au certificat d'addition
pris le 7 Juin 1847 par le Sr Covlet
Paris le 30 août 1847
402 Pour le Ministre et par délégation
Le Maître des Requêtes directeur
Page 395 signé: a Senne

No 228
Ballival
V. page 395
Baumgardent
Langlois

Pour Copie conforme
le Général de Division
Directeur
du Conservatoire des Arts et Métiers
Signé: A. Morin
Seal
Paris le 12 Février 1873

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1103

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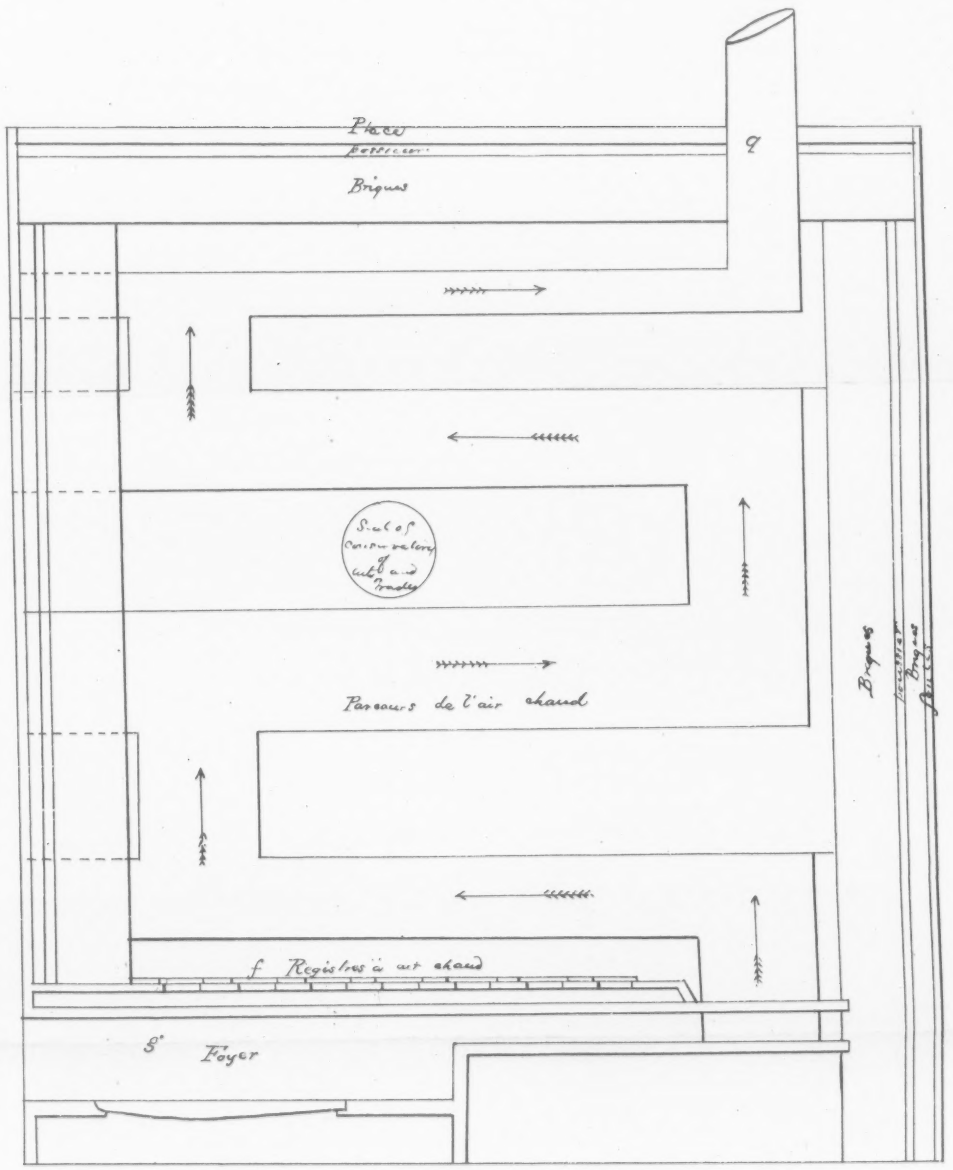
No. 228.
Rail Ways
&
Baungarten
Langlée

1re Addition.

Fig. 3
Four Corlet

Pl. 2.



Coupe sur la longueur 1/10

(m. S. S. 2)

Paris le 7 Juin 1847
Signé: Corlet

Vu pour être annexé au Procès-verbal d'adjudication
fait le 7 Juin 1847 par le Sr Corlet
Paris le 20 août 1847
Pour le Ministre et par ch. légation
Le Maître des Requêtes Directeur
Signé: A Jeune

Pour copie conforme
le Général de Division
Directeur
des Fortifications des Arts et Métiers
Signed
Seal
Paris le 12 Février 1879

Fig. 4.

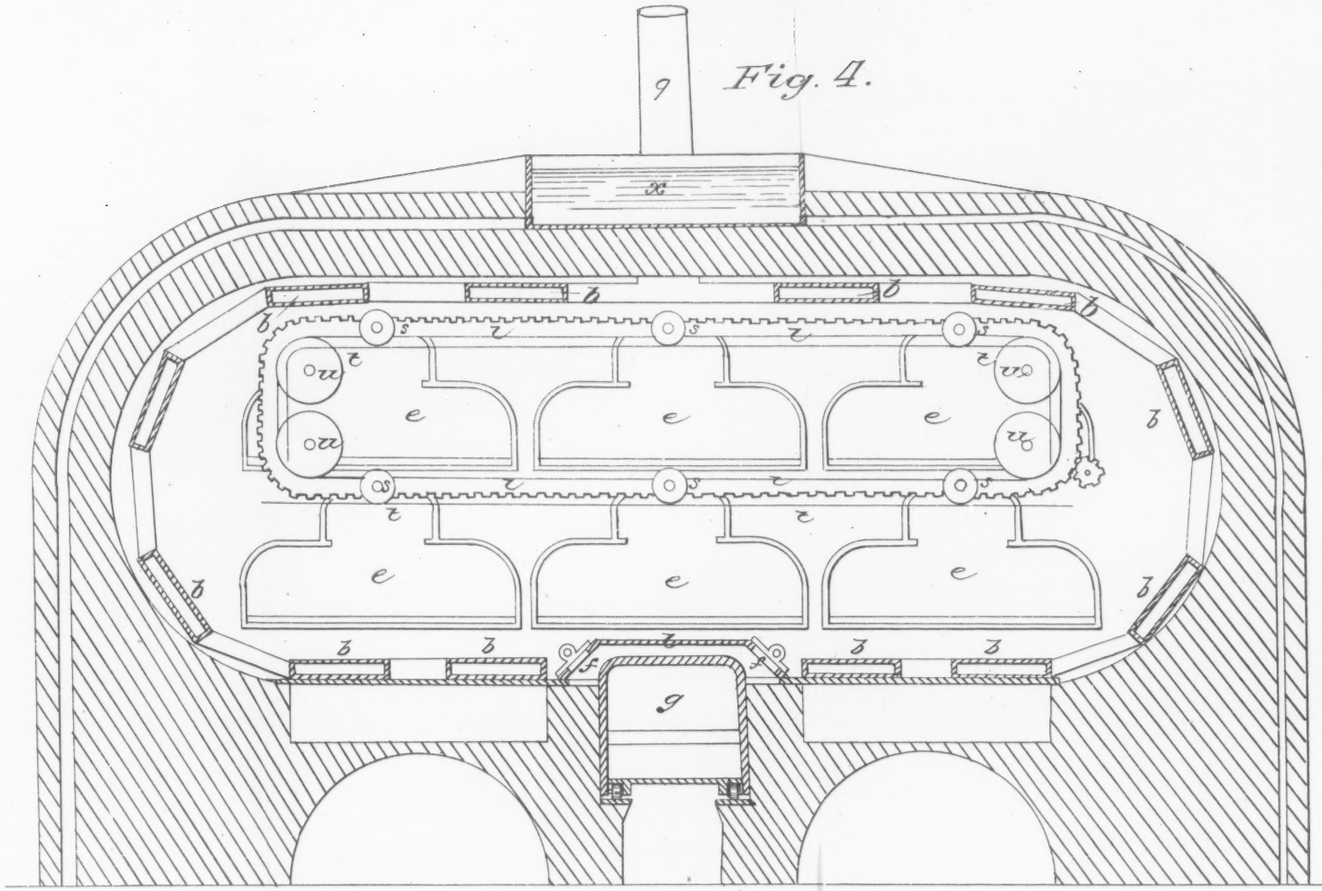
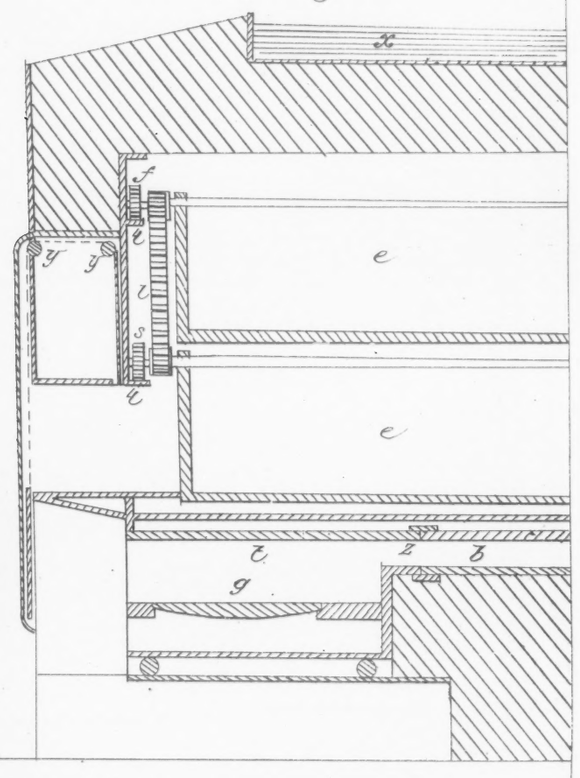


Fig: 5.



Echelle au 1/10

1 mètre

1 2 3 4 5 6 7 8 9

Paris le 7 Juin 1847
Signé: Covlet

Vu pour être annexé au certificat d'addition
pris le 7 Juin 1847. par le Sr Covlet
Paris le 30 août 1847
Pour le Ministre et par délégation
de Maître des Requêtes Directeur
Signé: A Tenac

H 044

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No. 2408 –
Ballastal
v page 397
Baumgardent
Langles

Vu, copie conforme
le Général de Division
Directeur
du Conservatoire des Arts et Métiers
Signé: Molleron

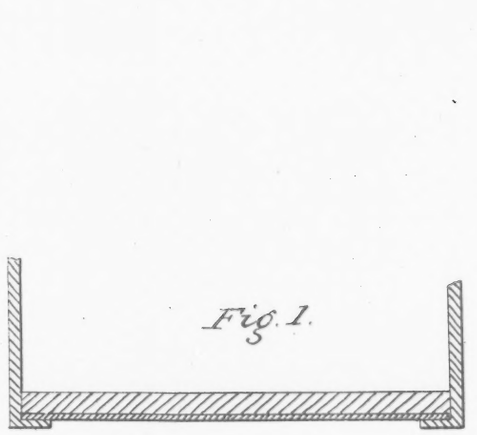
Seal

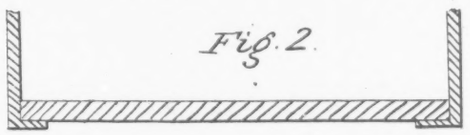
Paris le 13 Février 1848

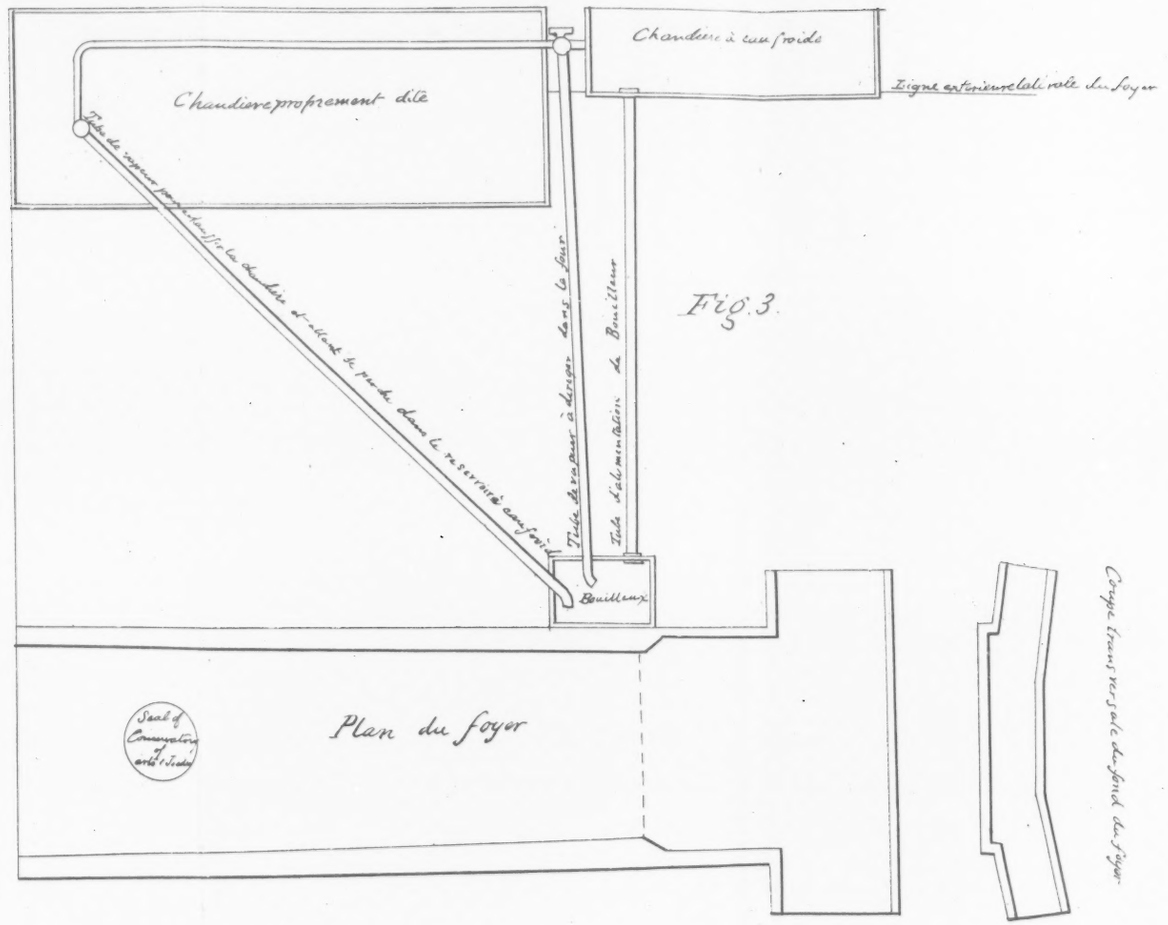
2ème Addition

(M. P. S 2)

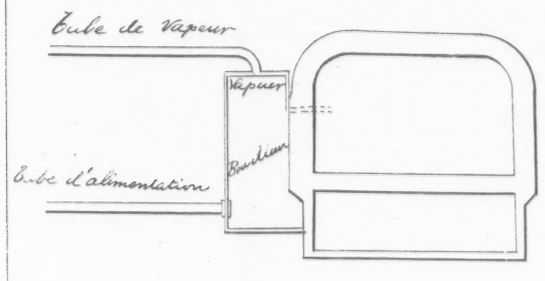
Plan des
Tubes Chaudieres et Reservoirs

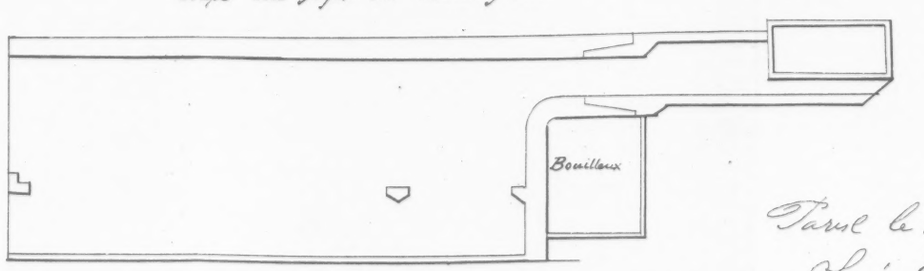





Chaudiere proprement dite
Chaudiere à eau froide
Ligne extérieure latérale du foyer
Tube de vapeur particulier pour la chaudiere et allant se rendre dans le reservoir à eau froide
Tube de vapeur à diriger dans le foyer
Tube d'alimentation de Bouilleur
Bouilleux
Fig. 3.
Seal of Commissioners of Arts & Trades
Plan du foyer
Coupe transversale du foyer sur la longueur

Coupe transversalé du foyer
sur le devant





Paris le 11 juin 1847
Signé: Coulet

Echelle au 1/10e d'execution.

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Vu pour être annexé au certificat d'addition
delivré le 12 juin 1849 pour le Sr Coulet
Paris le 30 août 1847
Pour le Ministre et par délégation
Le Maître des Requêtes, Directeur
Signé A. Senac

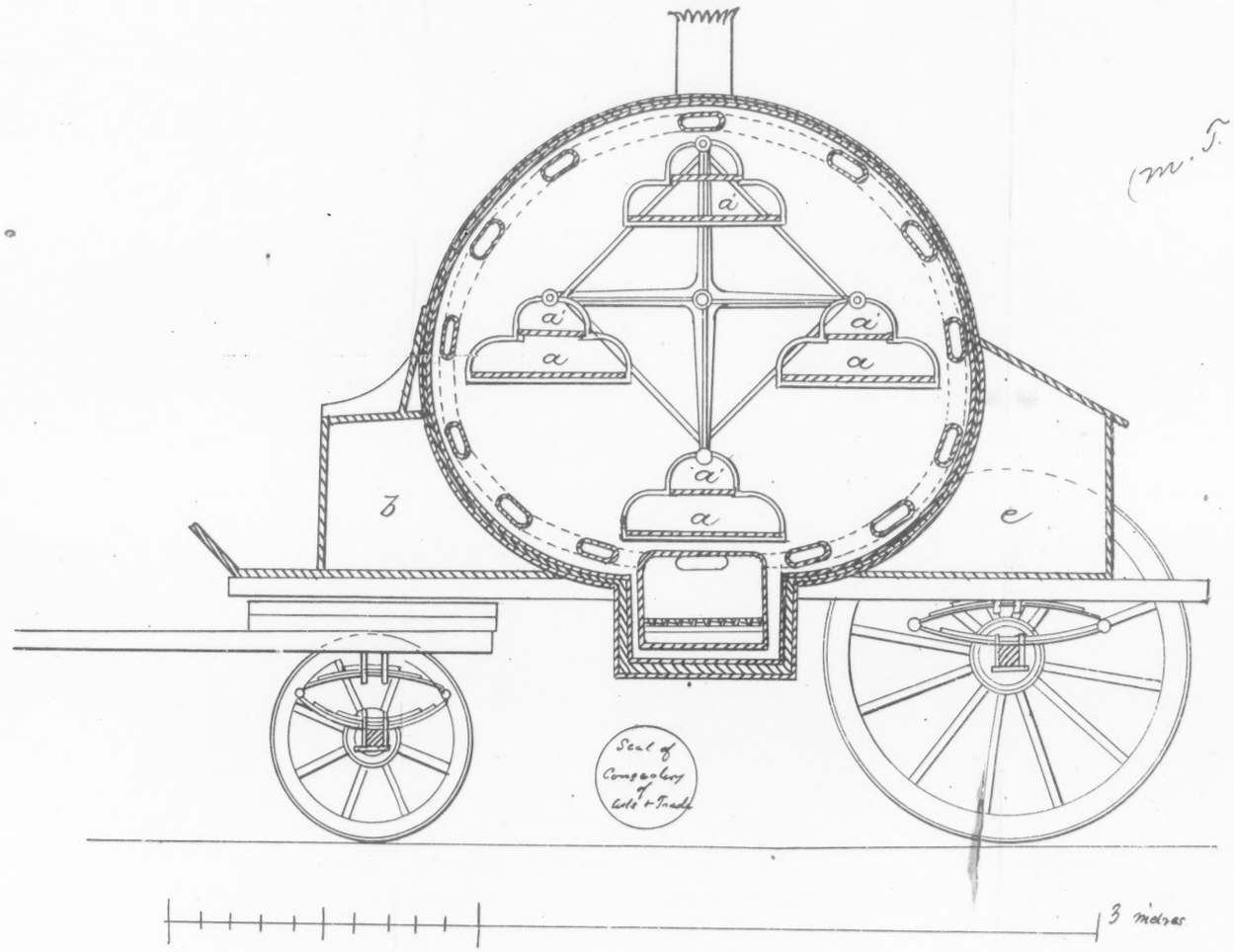
No 228
Ballard
v. page 398
Baumgarden &
Langles

Pour copie conforme
le Général de Division
Directeur
du Commissionnement des Arts Métiers
Signé A. Morin
Paris le 12 Février 1847

Seal

9ème Addition

(m. T. S. 21)



Paris le 19 octobre

Signé. Coulet.

Vu pour être annexé au Certificat additionnel pris le 19 Octobre 1848, par le S. Coulet
Paris le 29 Decembre 1848
Pour le Ministre et par délégation
Le Secrétaire général
Signé Fleury

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Ball + al
v. Page 399
Baumgarden and
Langke

Seal

Pour copie conforme
le Général de Division
Directeur
du Conservatoire des arts et Métiers
Signé M. Morin
Paris le 12 Février 1873

H Ball

Oven

No. 15753. Patented Sept 23. 1856

Fig: 2

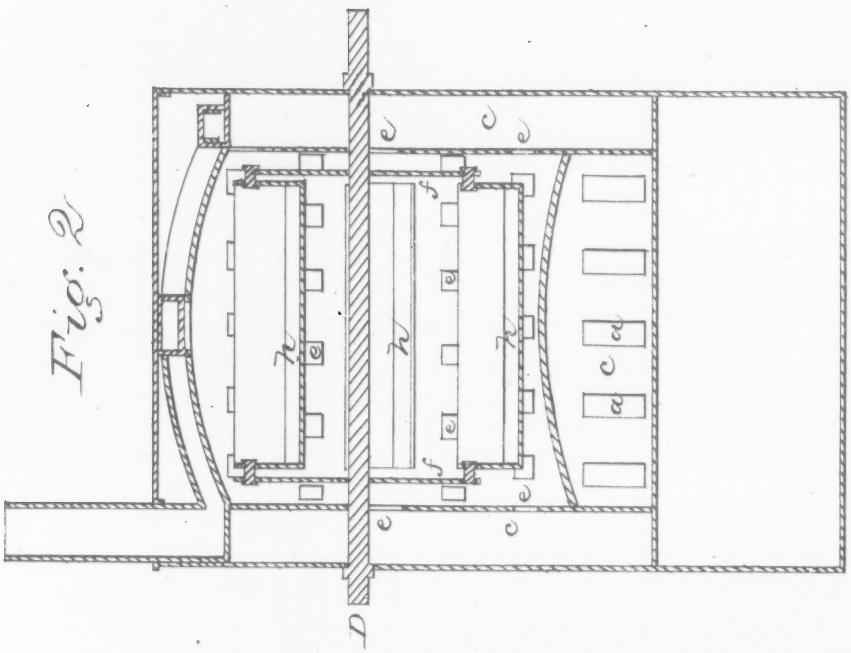
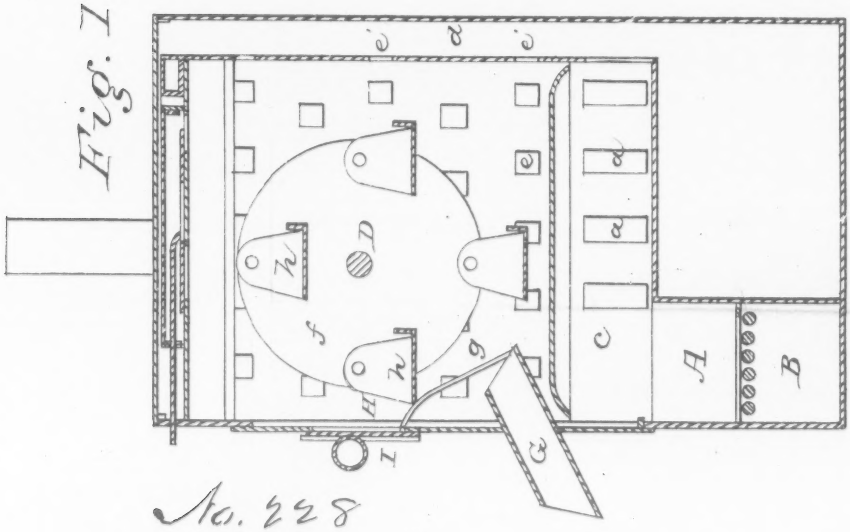


Fig: 1.



No. 228
Ball rack
& page 406
Baumgarden &
Langles

H. Ball
Oven

No. 4026 — Reissued Jun. 14. 1870

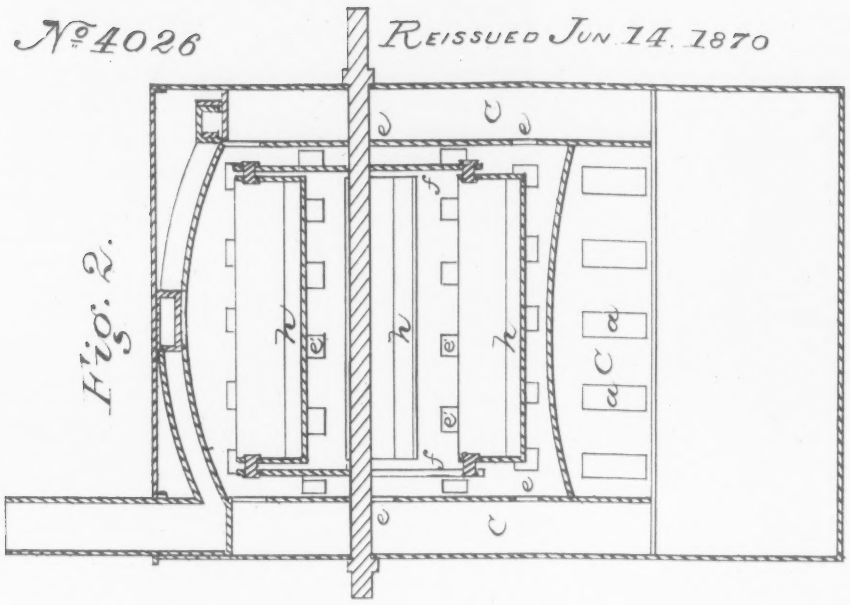


Fig. 2.

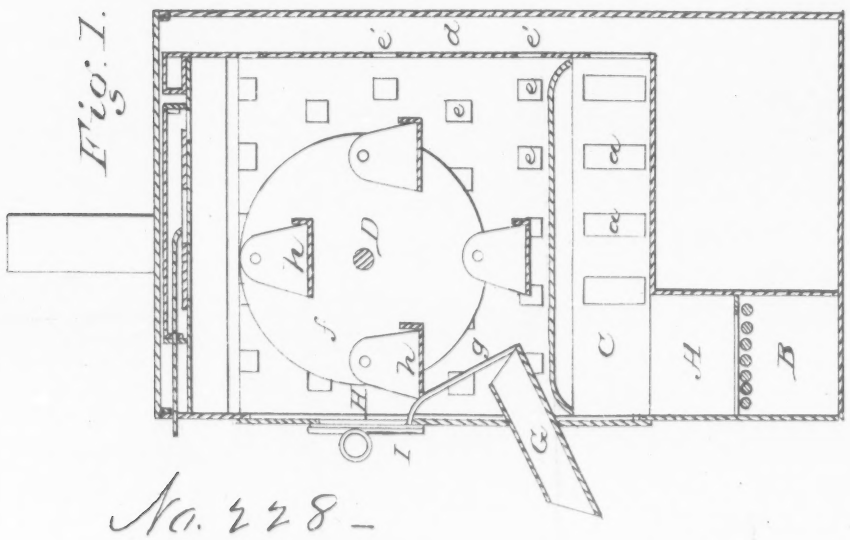


Fig. 1.

No. 228 —
Ball v. Banningarden & Langles.
Vol. 1 page 420

H Ball
Oven

No. 3666 Reissued Oct. 12. 1869.

Fig: 2.

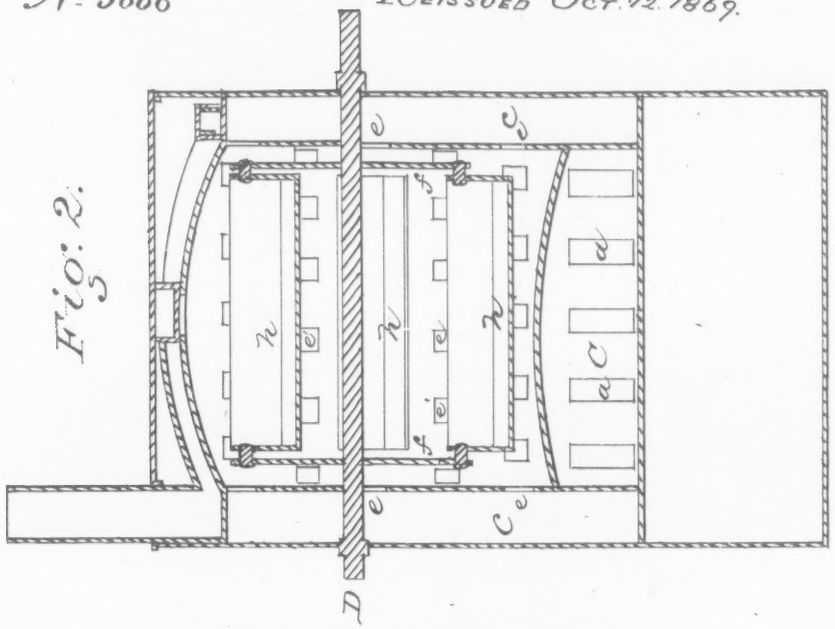
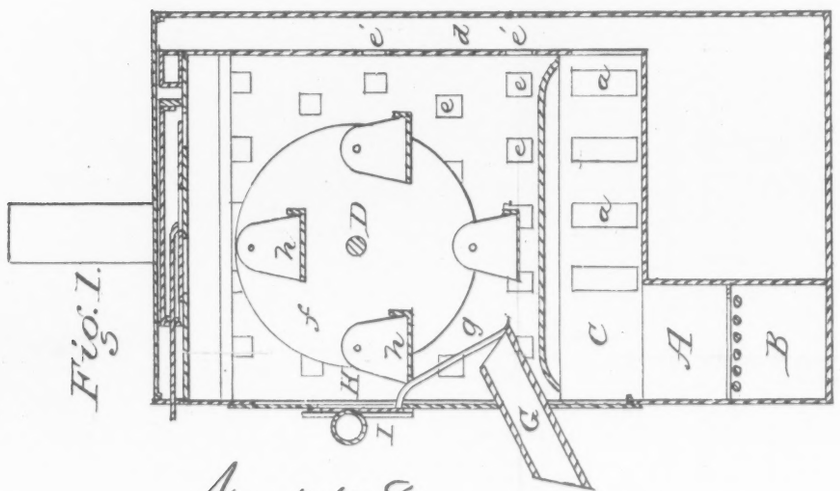


Fig: 1.



No. 228 –
Ball vs. Baumgardens
Langles.
page 413